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ORIGINAL LECTURES.

CLINICAL REMARKS

ON FACIAL NEURALGIA, TREATED BY NEURECTOMY.

Delivered at the Orthopedic Hospital and Infirmary for Nervous Diseases, Philadelphia.

BY S. WEIR MITCHELL, M.D.,
PHYSICIAN TO THE INFIRMARY.

(Reported by GUY HINSDALE, M.D.)

GENTLEMEN: On the 29th of April, 1881, Ann D. came to this clinic suffering from facial neuralgia. She is forty-three years of age, and has been employed in housekeeping. For the last fifteen years she has lived in New Jersey and has enjoyed comparatively good health until three years ago, when a dysmenorrhœa, which had always been severe, became greatly exaggerated. In the summer of 1876 she had, without known cause, her first attack of facial neuralgia. The pain began in the lower jaw upon the left side, and finally extended so as to involve, in turn, other nerve branches on that side of the face. This attack lasted for six weeks. There have been since then several distinct onslaughts of neuralgia, each of them longer and more severe than those which preceded.

When she applied here her condition was one of absolute health, save as regards the maxillary pain and the uterine troubles, which latter seemed of late, however, to have been less annoying. The menstrual flow did not appear to bear any causal relation to the neuralgia, nor, when the pain was present, did it seem to be increased during menstruation.

The facial pain occurred every few minutes, day and night, and lasted a variable time, but not over two or three minutes. At first it began at a point in the jaw at, or near to, the mental foramen, but soon spread to the second and, finally, to the first branch of the fifth nerve. It was increased or caused by mastication, by deglutition, by talking, and by exposure to cold air. I could find no point of the face or mouth where firm pressure would either cause or inhibit the pain, neither was the stomach responsible; nor yet the teeth, most of which had, as usual in these cases, been relentlessly drawn.

In every such case as this one, where clearly no obvious local cause of pain can be made out, we are forced back upon two sets of measures—an effort to relieve the general nutritive defects which cause pain, and with this, or failing in this, a course of what is always more or less experimental therapeutics, that is, the use in turn of the various drugs like quinia, gelsemium, aconite, veratria, croton-chloral, and morphia—agents which alter the sensorial centres or the conductors in some such way as to lessen pain, and sometimes to do away with the cause of pain. It is hard to say succinctly more than this of these means, but, whatever be their value, it is increased or their use in some cases made needless by a long and thoroughly systematic effort to lift the general health above that level at which pain is one of the many evil probabilities. But these means had, in this instance, failed, and the various drugs used in neuralgia had had no better fortune, while, happily, my patient had escaped the habitual use of morphia.

I was unwilling to resort to the knife without a full trial of galvanism, which, in many supra-orbital neuralgias, is a most valuable agent, and, in some cases, is competent to effect absolute cures. In others, it merely relieves, but I have seen cases in which, although section of the nerve had failed, frequent and long use of galvanism afterwards triumphed.

Our patient was therefore put in bed, ordered to speak as little as possible, and was fed with food which demands no use of the teeth. Galvanism was used thrice a day for half an hour each time, the current being just enough to be distintly felt, since it is usual to find that more severe applications, save in the case of deep-seated nerves, do not answer as well as these milder currents. For a week the current was peripheral; then for a week we reversed it. If you were to ask why this was done, I should answer that, in my experience, it is sometimes indifferent as to what direction the current takes, but that sometimes it is not, and that nothing but a therapeutic experiment will decide the matter. In this present case galvanism proved utterly useless, and I was forced to the last resort of defeated therapeutics—the surgeon's knife.

Dr. T. G. Morton, one of the surgeons to this hospital, operated on the 31st day of May, 1881, entering the inferior maxillary canal with a small trephine at the point A of the diagram. In accordance with my request, the nerve was stretched, and then a half-inch exsected. I wished, also, to pull on the peripheral end so as after section to tear away as much of it as possible, but this was not done.

My desire to destroy so much of the nerve arose from a but too large knowledge of the ease with which cut nerves reunite. There was a wonderful illustration of this repair of nerves in a case of painful neuroma of the skin,[1] for the relief of which the late Dr. Maury exsected a portion of the nerves of the brachial plexus. Although the pain in that case was relieved for several months, within a year it became violent, and two years later was as severe as before. At the autopsy, six and a half years after the operation, the man being eighty-three years of age, the cut ends of the brachial plexus were found to have completely reunited. The connecting band was an inch and a half in length, remarkably strong and thick. This is a most notable fact, for while repair is rapid in the young, and very, very rapid in young animals, it has been generally supposed that the nerve ends would not reunite in old subjects.

It is important, therefore, to be careful to remove a large piece of the nerve, and, perhaps, it is almost as well simply to stretch the nerve as to cut out a piece of it. There is, in fact, no way, as yet tried, to prevent the extremities from reuniting, even doubling the ends over and pinning them back having failed in my experience. I have known cases where neither the second nor even the third division of a nerve has precluded the re-uniting of the ends. There is another case of mine on record where from one to three inches of the nerve was removed three times in succession, but where complete restoration took place. The fact that the inferior maxillary nerve runs in a canal, offers a better chance of permanent isolation of the peripheral end, and should I again have occasion to divide this nerve, I would make an effort to block the canal. I think this might readily be done by dissecting up a piece of

[1] Painful Neuroma of the Skin. Duhring. Amer. Journ. Med. Sciences, Oct., 1881.

the periosteum, and filling with it the bony canal, or by using carbolized sponge in the same manner.

When it becomes desirable to think of nerve-section or stretching, it is well to have a clear idea of why we are to resort to an operation. A distinct reason for it exists when it seems probable that the irritative cause lies in the periphery, and may, by operation, be cut off from the sensorium, which it disturbs; but also in cases where the cause is dubious or central alone, there may yet be two reasons for a section: First, because section or stretching in some way reacts on the centre so as to lessen its pain-making capacity; and, second, because in most old neuralgias of plainly central birth, the peripheral skin territories become sensitive, and are then easily played upon by external influences which in turn exasperate the abnormal centre and produce incessant attacks of pain.

It is well, also, to know in what nerve-filament the pain first started, since, in any view, that is the nerve to stretch. In the present case the pain had extended widely, in accordance with a law which seems to govern such cases—a law of diffusion of sensitiveness. At first one group of ganglia suffers, and then, as if the heightened capacity to cause pain were contagious, it is propagated to others, until at first near and then distant groups of cells are what I like to call sensitized, much as is seen in another fashion in tetanus.

It is my custom in all neuralgias to ask what causes pain and what lessens it. In a large number of cases, I am told that exposure to cold will bring on or increase an attack. Why cold air should have this effect, why it should be more hostile than heat, I cannot say. Nothing in medicine is, however, more sure than that, in certain maladies, the surfaces of the body acquire an increase of susceptibility to cold, and that a cool draught of air is competent to awaken or cause pain, as it is not in health. I showed years ago that in healthy birds, if we subject the naked skin to sudden chill we may cause the most remarkable phenomena in the way of convulsions or sleep, but in normal man, only the interior of the outer ear is able, on exposure to abrupt changes of temperature, to give us like phenomena. When, however, the centres have been irritated by disease, we seem to acquire an increased tendency to respond to atmospheric changes, so that in neuralgia, rheumatism, sclerosis, and the like, we become responsive in some way to impressions which are without notable influence on the healthy frame.

The period of time required for an abrupt cooling of the skin to occasion pain or other phenomena is another matter for thought. In some very sensitive cases a few moments suffice; in others the result follows after much longer periods. In birds, the vertiginous symptoms which follow the application of cold to limited skin-spaces require a certain length of time—from two to ten minutes. You will find, as a rule, in nearly all old neuralgias, wherever situated, that motion of parts concerned, and even of parts physiologically related to them will cause or increase the pain. In sciatic neuralgia, especially of neuritic or rheumatic birth, there is an obvious mechanical explanation of this in the pinching of the tender nerve, and it will be found that the effort of defecation and, more rarely, of urination, give rise to like results. In facial neuralgias the explanation is less easy, since in any fifth-nerve neuralgia, but most notably in that of the second and third branches, talking, chewing, laughing, and even deglutition cause or increase the pain. In these extreme cases, any sensation about the face, as a rough touch, or gentle friction, may be equally able to effect a like result; so that perhaps it is the awakening of the normal sensations which in all cases accompany physiological motor activities, which in some way arouses the morbid pain-making capacities of a hyperæsthetic sensorium. At all events these facts are found only in old and tenacious neuralgias. The pain is capable of being reproduced by almost any ordinary influence affecting the skin and also by almost any facial motor activity. You will see now and then cases in which severe but transient pain arises in certain people whenever they are abruptly exposed to great cold or to damp and cold.

Also, it is worth knowing that the steady use of moderate, stabile currents over and through the exit points of the fifth nerve is competent to relieve this condition; but in this and in the early stage of any facial neuralgia the first thing to think of is the patient's general condition. Cod-liver oil, tonics, and change of climate are of more value than all the violent drugs to which hasty therapeutists, driven by a sufferer impatient of pain, are apt to resort.

I wish to say a word about the teeth. In any neuralgia, have them looked over carefully by an expert, and let him not neglect to ascertain if there be a catarrhal trouble of the antrum; but never draw a sound tooth, or even a filled tooth, on no more evidence than the presence of a neuralgia. Bad teeth are rare causes of grave and persistent neuralgia.

When seeing many neuralgic cases, you will observe that the attacks come, by preference, at certain times of the day or night. For this there must be some distinct reason; but, as yet, the subject has been insufficiently studied, and regularity of attack is apt, without other reason, to induce the belief in a malarial cause; and since, in all fifth-nerve neuralgias especially, quinia is often a good remedy, the triumph of this drug is apt to be regarded as a fair confirmation of a theory which is certainly false in most instances.

As a rule, with many exceptions, fifth-nerve neuralgias are prone to recur early in the day or before noon, and sciatica to be worst at night, even if the patient be constantly in bed.

FIG. 1.

Shows the area of complete anæsthesia, surrounded by the zone of partial anæsthesia. The dotted lines indicate the corresponding areas in the mucous membrane of the lips and cheek.

In some cases, and before the disease is constant and the attacks frequent, and especially in stump and other traumatic neuralgias, the attacks are nearly all traceable to storms; but in others the chronal relations of such pain seem to be due to physiological laws which are as yet wrapped in complete mystery.

Sciatic neuralgias are more prone than others to be due to inflammatory states, and the tendency of these to be worse at night may well be related to the general

physiological law which gives rise to a normal elevation of temperature at night, and to a similar rise in the heat curve in fevers and in all states which give rise to febrile conditions. This is, however, but a more or less happy guess in regard to a problem most difficult of solution.

FIG. 2.

Shows the areas of complete and partial anæsthesia in the gums. The mucous membranes behind the teeth showed normal sensation. Section of inferior dental nerve at A. These diagrams were made twenty-seven hours after the neurectomy.

Dr. Morris Lewis examined the area of sensory disturbance before and after operation. Save for the slight hyperæsthesia, the neuralgia caused no change of moment, nor is it common to observe in these cases dysæsthesia. Dr. Lewis's diagrams represent the loss of pain sense within and without the mouth after the section by a dark space, and of loss of touch by a lighter one. These areas are somewhat smaller now than immediately after the neurectomy—a fact which I have often observed, and have elsewhere endeavored to explain.

It is to be observed that these sections are the only trustworthy means of obtaining a true surface map of the areas of nerve distribution; but, since surgeons are usually indifferent as to accurate study of such cases, we are still far from having profited as we might have done by neurectomy.

Our patient remains well at this date; but I should not be surprised were she to return to us with a reconstructed nerve and a renewal of the pain.

Two days ago, February 26, 1882, the patient again appeared at my clinic. She is entirely free from pain, and the area of insensibility is lessening. I was struck and interested to see that the chin muscles of the face on the left side were constantly quivering, and that they exhibited the electric reactions of muscles cut off from the centres. I was a little surprised at this, until our assistant physician to the hospital pointed out to me that the incision made to reach the nerve had been vertical, and that it had thus cut the lower branch of the seventh nerve, the filament which supplies the muscles of the chin.

ORIGINAL ARTICLES.

PREVENTIVE MANAGEMENT OF SMALL-POX.

BY WILLIAM H. FORD, M.D.,
OF PHILADELPHIA.

As there is no contagious disease whose prevention is so completely within human control as small-pox, it does at first sight seem strange that it should continue to commit its ravages among civilized people. Theoretically, nothing appears easier than its complete mastery and final utter eradication; but practically, the difficulties in the way of its suppression and radical extinction seem to be almost insurmountable. This results from the want of unanimity of sentiment with regard to the protective power of vaccination, from the absence of a general law requiring the vaccination of all persons, and its periodical repetition, and the lack of thorough and rigid application of other supplemental measures necessary to restrict the disease whenever it appears.

Universal vaccination is the main reliance in dealing with this dreaded plague; in fact, if this could be secured and maintained, there need be little or no recourse to other means of prevention. But as so desirable a result is not yet attainable, resort must be had to other measures which form an important and indispensable part of the preventive management of all contagious diseases.

Whenever a case of small-pox occurs, the chief and constant aim should be to prevent the communication of the disease to other persons. This is sought to be accomplished by prompt *notification* of the fact of the existence of the disease, by the *isolation* of the sick, by the use of *disinfectants*, and by the application of such *other measures* as tend to restrict the disease within the limits of its origin, to which allusion will hereafter be made.

Every case of small-pox should be promptly reported to the sanitary authorities, so soon as its nature is definitely determined. This duty is usually imposed upon the physician in attendance, or, when no physician is employed, upon the householder or responsible head of the family or institution where the case occurs. The law should fix the responsibility upon some one with such particularity that there can be no chance for evasion, and its violation should be made punishable by a heavy fine. The object of this notice is to afford the proper authorities the earliest opportunity for inquiring into all the circumstances connected with the origin of the disease, and the management of the patient and the premises, and for obtaining information on the questions of vaccination, attendance of children at school, and the relations of the case to the surrounding neighborhood, so that prompt and efficient measures can be instituted for restricting and preventing the spread of the disease.

It is absolutely indispensable, in the interests of the public health, that every case of small-pox should, from its very commencement, be completely isolated, either at home, or, when this is not practicable, in a hospital or some place specially prepared for the purpose. It is for the sanitary authorities to determine this question, and in exercising this function, every possible means of persuasion should be used to gain consent before the strong arm of the law is invoked, and the greatest care and caution should be observed in making the transfer in such a manner that the patient shall be exposed to the least possible risk to his health.

In the habitations of the poor, where there is always scarcity of space and a crowded condition

of the inmates; in dwellings where there is no place adapted for secluding the patient; in boarding-houses, hotels, public institutions, and places of general resort, such as dwellings connected with stores; or where the patient cannot be properly attended at home, either with regard to himself or the family, or both—there is unquestionably no doubt as to the propriety and duty of the prompt removal of the sick to a rendezvous or hospital specially prepared for such cases.

The isolation of the sick person implies his removal to a room most completely separated from every other part of the house—a veritable domestic quarantine. It should be well lighted, and well ventilated, and should have a fire-place, if possible, in which a fire should be kept constantly burning. All extraneous articles of furniture, carpets, and clothing should first be removed. The attendants should be chosen from among those who have had the disease, or who are protected by recent vaccination. No one should be permitted to have access to the apartment except those whose services are absolutely essential, and every precaution should be used with regard to cleanliness, disinfection of excreta, clothing, and everything in use in the room, so that there may be the least possible risk of spreading the infection. A sheet moistened with a strong solution of carbolic acid and suspended across the doorway, or in the passageway leading to it, is necessary to complete the isolation of the patient.

It is no longer considered admissible to treat cases of small-pox in general hospitals or public institutions, except in a separate pavilion isolated from the other buildings and managed under strict quarantine regulations; and even then this plan is objectionable, or account of the danger of multiplying the foci of contagion. Every town and city ought to be provided with a special place, either temporary or permanent, for the treatment of this disease in the event of its outbreak.

A law prohibiting the use of any kind of public conveyance whatsoever by a person affected with small-pox should be rigidly enforced, and its infringement should be made punishable by a heavy fine. In the event of such misuse of public vehicles, provision should be made for their speedy and thorough disinfection. Such a law necessitates the holding in readiness of special conveyances, or ambulances, for the transport of all persons affected with contagious diseases, and their use should be regulated by the health laws.

It is needless to say that every child, immediately upon the appearance of the first symptoms of small-pox, should be withdrawn from school, and its readmission should not be permitted without a properly attested certificate that it has entirely recovered, and that there is no longer any risk of its communicating the disease to others. Should there be other children in the family, they also should be required to leave school, though perfectly well, and should not be readmitted until provided with a similar certificate from a qualified sanitary officer stating clearly that the house is no longer infected, and that the danger of conveying the infection has ceased to exist. Only in very exceptional cases is it necessary to disband a school on account of small-pox having been discovered in some one or more of the pupils, since by properly performed vaccination, which should be an indispensible condition and prerequisite of admission to all schools, very general protection can be secured.

The inmates of an infected house should, so far as is practicable, cease to associate with the public, and their attendance at church, public entertainments, and assemblages of any kind, should be strictly interdicted. It would be advisable, if at all practicable, to have the well remove from the house, provided it is done early, and before there is any danger of thus communicating the disease.

The public ought to be apprised of the special locality where small-pox exists, lest they unknowingly expose themselves to the risk of contracting the sickness. How to accomplish this object without creating unnecessary public alarm, is a problem not so easily solved. It has been the custom in some places to placard the infected house with a conspicuous notice of the fact, but this plan has excited considerable opposition. The decision of the question might be left to every city or town to determine by its own experience. To depend upon the inmates of the house to warn all those who approach it, is trusting too much to the weak and selfish part of human nature. To have recourse to sanitary espionage, would be attended with the best results, if practicable, and not too expensive a procedure. It must be admitted, on the other hand, that the more rigid, harsh, and embarrassing the special requirements, the stronger the temptation and inducement for concealment of the disease. Better, perhaps, would be the plan of keeping the premises under general sanitary supervision, by occasional visits of officers qualified to advise and direct the observance of all prudential measures, and clothed with authority to institute more arbitrary and restrictive regulations as a penalty for non-compliance.

No public funeral should ever be permitted in these cases, and public notice of the cause of death should always be required.

No obligation to the patient or his friends is required of the physician to keep the nature of the disease a secret; on the contrary, by so doing he bemeans his profession, and dishonors himself in that he wrongs the public by pandering to the selfish interests of the few.

After death, the interment of the body, without an assemblage, as speedily as is possible consistent with propriety, should be the invariable rule; and once buried, the body should not be permitted to be disinterred, except after a lapse of time sufficient to preclude any possibility of infection therefrom; and even then this act should never be performed except under authorization and supervision of the local sanitary authority.

Another and most important means of restricting the spread of small-pox is disinfection, which consists in the destruction of the germs of the disease. The early, free, and constant use of disinfectants is a necessary part of the prophylactic treatment of every case of this disorder. In a certain sense, fresh air and sunlight may be considered disinfect-

ants; hence, there should be the freest ventilation of the room and house consistent with the safety of the patient. A fire upon the hearth contributes much to the active circulation of the air of the room. There should be the most scrupulous cleanliness with regard to the patient, attendants, bedding, and everything about the apartment. Everything from and about the patient should be promptly and thoroughly disinfected throughout the progress of the disease, and after its termination. This can be accomplished by burning, by thorough boiling, by exposure for a considerable length of time to dry heat of a temperature of 240° to 250° Fahr., and by the use of volatile and liquid chemical agents. At a temperature of 250° Fahr. some articles of clothing are apt to be scorched. A lower degree of temperature will probably answer the purpose of purification, if the articles are exposed to it for several hours, or for a sufficient length of time to insure the penetration of the heat to every part of the fabric; but it should never be lower than 220° Fahr. All the discharges from the patient should be received in a vessel containing some reliable disinfectant, such as a solution of two pounds of sulphate of iron, or of two fluidounces of chloride of zinc, or of four fluidounces of strong carbolic acid in a gallon of water, and thereafter immediately removed. When there are no sewers, the discharges from the patient, after thorough disinfection, should be deeply buried in the ground, far from the house and the source of water supply. Small articles, when soiled, should be burned, and the bed and body linen, when removed from the patient, steeped in the zinc or carbolic-acid solution above mentioned, and afterward boiled in water by themselves. The discharges from the nose and mouth may be conveniently received in a vessel charged with the chloride or carbolate of lime. To prevent the passage into the air of detached particles of infectious matter from the surface of the body of the patient, it is advisable to use inunctions of camphorated oil, or of sweet oil impregnated with carbolic acid, or of carbolated glycerine, to be applied daily to the whole surface of the body. It is very doubtful if the poisonous quality of the little particles floating in the air is at all affected by the amount of disinfection that it is safe to practise in the sick-room. There is, however, no objection to the use of chloride of lime or of the carbolic acid spray. But as aerial disinfection is practically of little value, the main dependence must be placed on free ventilation, cleanliness, and thorough disinfection, as already suggested. Food and drink that has been in the sick-room should not be used by other persons. The attendants should make free and constant use of disinfectants in cleaning their hands and articles in use by the patient, and nothing should be permitted to leave the room before first having been subjected to some form of disinfection. Every sink, water-closet, and privy-well in use during the sickness should be daily disinfected by the free application of some one of the above-named solutions, preferably that of the sulphate of iron, on account of its cheapness.

The clothing worn by attendants should be of such material as can be readily washed. Should it become necessary for an attendant to leave the house, a bath should first be taken, the hands, face, and hair being carefully cleansed with carbolic acid soap, and then only such clothing should be used as has not been exposed to infection. Subsequently, a free exposure in the open air is a wise precaution. Physicians cannot be too guarded in their attentions to themselves when attending a case of small-pox, as they are just as liable as other persons in attendance upon the sick to communicate the disease, and they should, therefore, as far as practicable, adopt the same precautions. A linen duster put on before entering the sick-room, and well buttoned up around the neck, will do much to protect the clothing from infection, and this should be hung up in the open air, after use, until the subsequent visit. The washing of the hands in carbolated water before leaving the house should not be neglected, as also the practice of exposure for a considerable time in the open air immediately after each visit. Before associating with other persons it would be well to first return home and remove all outer clothing, which should be hung up in the air for several hours. The thorough washing of the hands, face, and hair is also advisable.

The isolation of the patient should be continued for at least three weeks, or until all the scabs are removed and the skin is entirely smooth; and he should not even then mingle with other persons until after having taken a number of baths with the use of carbolic acid soap, and put on clothing that has not been exposed to infection.

After death or the removal of the patient, all articles of no value should be immediately burned, and everything in the room should at once be treated with a view to the complete destruction of the germs of the disease. This is to be accomplished by the use of the zinc or carbolic-acid solution above mentioned for steeping clothing,[1] washing floors, walls, and furniture. Wall-paper should be removed by moistening with the carbolic-acid solution. Heavy clothing, beds, bedding, and other articles which cannot be washed without injury, should be spread out in the room so as to be freely exposed to the influence of fumigation. Then, after closing all the doors and other openings as tightly as possible, the room and its contents should be fumigated by burning sulphur in an iron dish, set in a vessel containing a little water, and kept closed for about twenty-four hours. At the end of this time, the room should be well aired for several days by throwing open the windows, and then the ceiling should be whitewashed, and the walls repapered or whitewashed. This work, to be effectual, should be supervised by a competent officer of the Board of Health. For the purpose of fumigation it has been estimated that 2 pounds of sulphur will be required for every 1000 cubic feet of air-space.

The manner of treating infected conveyances and railway carriages is similar to that advised for infected rooms. They should be fumigated with sulphur, the wood-work washed with solutions of zinc

[1] For this purpose the National Board of Health recommends a solution made by dissolving four ounces of sulphate of zinc and two ounces of common salt in a gallon of water.

or carbolic acid, the cushions and stuffed furniture baked, and then beaten and exposed for a considerable time in the open air.

Often it happens that there are no facilities for carrying out many of these requirements, and in such cases the aid of the local authorities is of the utmost value. Some suitable place should be provided for disinfecting, at a nominal cost, all portable articles, particularly such as cannot be conveniently or satisfactorily cleansed and disinfected at home, such as stuffed furniture, beds and bedding, woollen clothing, and the like. Such articles could then be removed, with due precaution, in a wagon specially prepared for the purpose; those of no value being burned in a furnace, and the remainder, after being cleansed and thoroughly disinfected by steam, dry heat, or by chemical agents, according to circumstances, returned to the owners. This plan will prevent serious embarrassment, and will ensure a more complete purification than can be expected under ordinary circumstances, and its general observance will unquestionably do much towards the preservation of the public health. The city of Philadelphia has such a disinfecting service, and its benefits have been clearly proved by an experience of several years.

When a person dies of small-pox, the body should be washed with a solution of carbolic acid or of chloride of zinc, of double the strength of that indicated above, and enveloped in a sheet saturated with the same solution, and placed in the coffin as soon as possible. A metallic coffin, hermetically sealed, is preferable to all others; especially is this the case when the corpse has to be transported to a considerable distance. It need not be added that no public funeral should be permitted, and that burial should take place with the least possible delay.

TREATMENT OF SMALL-POX.

BY W. M. WELCH, M.D.,
PHYSICIAN TO THE MUNICIPAL (SMALL-POX) HOSPITAL, PHILADELPHIA.

IN discussing the treatment of small-pox, it will be found convenient to divide the disease into six stages, as follows: *1. The Stage of Incubation; 2. The Initial Stage; 3. The Eruptive Stage; 4. The Stage of Suppuration; 5. The Stage of Retrogression, or Stadium Exsiccationis; 6. Convalescence.*

1. The Stage of Incubation.—When the date of infection can be clearly determined, this is found to be a stage not very variable as to time. In most cases sickening occurs on the eleventh or twelfth day, and the eruption appears on the thirteenth or fourteenth day after exposure. During this interval very much can be done to prevent or modify the disease. For this purpose drugs, however, are useless; likewise, no dependence can be placed upon diet or hygienic measures. But it is to vaccination we must look to accomplish either one or the other of the desired results.

My experience does not agree with that of Curschmann,[1] in that he has not been able to prevent variola, nor even render its course milder, by vaccination during the stage of incubation. On the contrary, I have in numerous instances been able to afford perfect protection against variola, and have many times seen the disease markedly modified by vaccination after undoubted infection. In order, however, that protection shall be complete, it is necessary that vaccination be not too long delayed after exposure to the contagion. If the vesicle has reached maturity—the areola being well-formed—and the infected person has not yet sickened, the chances then for perfect protection are very good. But if sickening occurs a little in advance of this stage of the vaccine vesicle, so that the areola and the small-pox eruption appear about the same time, we then have reasonable ground for hope that the disease may be modified. Contrary to the rule, I think I have seen vaccination, in some rare instances, exert a modifying influence over small-pox when the eruption has appeared before the vaccinia had reached the stage of the formation of the areola; so that vaccination should always be performed, even though considerable time has elapsed since exposure. Usually, however, it will be found if the vaccination has been done somewhat late, that the vaccine vesicle and the variola eruption will develop side by side, without the former exerting any modifying influence over the latter.

Some years ago, I published[1] a brief clinical history of fifty cases, in which primary vaccination was done on various days during the stage of incubation of small-pox, and as my subsequent observations bear out the same general facts then stated, I will submit a short analysis of those cases. Of the fifty cases, ten were perfectly protected, three very nearly so, eleven partially protected, and twenty-six unprotected. Of the eleven partially protected, only one died, and that one was an infant only a few days old, and of premature birth. Of the twenty-six unprotected, fifteen died. Among those partially protected, the average length of time which intervened between the performance of the vaccination and the appearance of the variola eruption was 8.9 days; among those in which there was no protection, it was 6.9 days.

I wish to call especial attention to the fact that the vaccinations in the above cases were all primary. When a person has once been vaccinated, and there is a partial return of susceptibility to small-pox, protection after infection can be more readily accomplished by revaccination than where the vaccination is primary. The reason of this is not difficult of explanation. It is simply because revaccination develops and runs its course more quickly than does unmodified vaccinia, and hence, protection is more speedily brought about.

In order either to confer immunity, or to give the best possible protection against small-pox by vaccination during the stage of incubation, it is of vital importance that the lymph used should be fresh and active. For performing vaccination under such circumstances, my experience leads me to prefer humanized lymph, and that, too, somewhat remotely

[1] Author of article on Small-pox and Vaccination, Cyclopædia of the Practice of Medicine, Zeimssen.

[1] Philadelphia Medical Times, Feb. 17, 1877.

removed from the cow. The fifty cases of which I have spoken came under observation during the epidemic of small-pox in 1871–72, and were all vaccinated with lymph of long humanization. During the present epidemic, I have in almost all primary vaccinations failed to confer immunity against the disease after infection by the use of animal lymph. This is not because vaccinia induced by animal lymph possesses less prophylactic power, but because the course of the process is slower—the areola usually being two or three days later in appearing. The lymph, therefore, which produces the most rapid development of the vesicle and areola is to be preferred in times of imminent danger, as during the incubation of small-pox.

When there is good reason to believe that so much time has elapsed since exposure that it would be impossible to confer protection to any degree by vaccination, inoculation, were it allowable, might, perhaps, be practised with advantage. I have had, however, no experience in the use of this measure, and, consequently, cannot recommend it from any personal knowledge of its value. Besides the legal objection to the operation, there is the difficulty of determining the precise time at which infection occurs, and without this knowledge it would be impossible to say of any case that it is too late to expect protection from vaccination. While it would be reasonable to suppose that vaccination performed one week after exposure to the variola contagion would fail to exert any prophylactic power against the disease, yet such does not always prove to be the case. Quite recently a mother and her four children were admitted to the Municipal Hospital, the mother having small-pox at the seventh day of the eruption; three of the children were unprotected by vaccination, and the other, a girl aged eight years, had been vaccinated in infancy. All four of the children were at once vaccinated. The girl previously vaccinated took well-marked vaccinoid, and enjoyed immunity against small-pox. The other three children took vaccinia; of these, one was perfectly protected, one had an exceedingly mild form of varioloid, and the other unfortunately suffered from unmodified small-pox, and died. I might add that these vaccinations were done with humanized lymph of long descent, which was kindly furnished me by my friend, Dr. S. N. Troth, the senior vaccine physician of this City, who has preserved, with great care, the old stock of virus in use in this country prior to the introduction of animal lymph, in the year 1870.

2. *The Initial Stage.*—This stage usually comprises a period of two or three days. After what has already been said, it would be needless to enter into any argument to show that vaccination is useless at this stage of small-pox. The hypodermic injection of vaccine lymph has been suggested, and its claims urged, particularly by Furley;[1] but that it is wholly devoid of prophylactic power, I have had ample opportunity to prove.

All attempts to cut short the disease prove unavailing. Bloodletting, formerly much employed, is now almost never used, even for the relief of symptoms. Large doses of quinia during the stage of invasion has been thought to exert a favorable influence over the course of the disease, but Curschmann's large experience shows that it possesses no such value. In short, we can do nothing more at this stage than treat special symptoms.

The popular idea of ages ago still prevails to some extent that it is necessary to keep the patient hot and sweating, and not unfrequently it is found quite difficult to overcome this prejudice. A room well ventilated and having a temperature of 65° to 70° Fahr. is best suited to the comfort of the patient. Febrifuge mixtures, such as liquor ammoniæ acetatis, liquor potassæ citratis, tinctura aconiti, etc., may be given in suitable doses and at stated intervals. If there is much irritability of the stomach, the effervescing citrate of potassa may be preferable. When the temperature is high, sponging with cool water is serviceable. Severe headache, attended with a flushed face, may be met by the application of cold water, iced compresses, or the ice-bag to the head. For the irritability of the stomach, swallowing of small pieces of ice will sometimes give relief; subnitrate of bismuth is also of service. The nervous symptoms, such as insomnia, delirium, and convulsions, may be relieved by chloral hydrate and bromide of potassium, given either separately or combined. For the convulsions of children, chloral is especially serviceable. To relieve the pain in the back, which is often intense, Dover's powder, when the stomach is retentive, may be given. Gentle cathartics may of course be administered whenever indicated.

I would strongly advise against the application of mustard to the back for the relief of pain, to the epigastrium for the relief of nausea and vomiting, or to any other locality for any purpose whatsoever, because of the increase of eruption which it is sure to invite to that particular locality. I have frequently seen the eruption rendered excessively confluent on certain parts of the body by the application of sinapisms during the initial stage, and that, too, without the eruption anywhere else being diminished. This result is not peculiar to the action of mustard, but may be produced by any irritant or injury, and is doubtless due to the increase of capillary circulation which is thus artificially or accidentally brought about.

During this stage, the best beverages are cold water and iced lemonade. The diet should be light and easy of digestion.

3. *The Eruptive Stage.*—By this stage is meant the period beginning with the first appearance of the characteristic eruption, and continuing until complete pustulation has occurred. The duration of this period in variola vera is usually about seven or eight days. The great desideratum at this stage of the disease is a remedy which will control or modify the eruption, since danger is greatly dependent upon the quantity of the eruption and the long and tedious course which it pursues. It was thought that the antiseptic or antizymotic class of remedies would meet this indication, but after a full and fair trial, I think, concerning their alleged

[1] Lancet, May 25, 1872.

efficacy, the verdict *not proven* must be pronounced against them.

During the epidemic of 1871–72, I subjected seven cases of unmodified small-pox to the use of sulpho-carbolate of soda; the dose administered was twenty grains every three or four hours. The result was so discouraging that I abandoned the drug, for not one of the number recovered. Of the seven cases, four began taking the sulpho-carbolate on the second day of the eruption; of these, one lived three days; one, five days; one, eight days, and the other fifteen days. Two began its use on the fourth day of the eruption; of these, one lived two days, and the other three days. One began its use on the fifth day of the eruption, and lived twenty-one days. It is true, these were all very severe cases—all of them confluent, and some malignant. But they certainly represent a class of cases requiring specific treatment, were any such treatment known.

But my experience with antiseptic drugs is not limited to sulpho-carbolate of soda. I have also used salicylic acid, salicylate of sodium, and carbolic acid, the latter both internally and externally, but with results no more encouraging than those which followed the use of sulpho-carbolate of soda. With xylol I have had no experience.

Having decided negatively the question of specifics, it only remains for us to treat this stage of the disease, as the previous one, by regulating the condition of the patient, and giving attention to special symptoms as they arise. The febrile symptoms, which usually remit to a considerable degree after the appearance of the eruption, may, when present, be met by the remedies previously indicated. It sometimes happens in a depressed condition of the system that the surface of the body is cool, particularly the extremities, and that the eruption is slow in appearing. In such cases, the application of heat to the extremities, and the administration of hot stimulating drinks—hot toddy, for instance—may be of service. For the convulsions which frequently occur in children at the early part of this stage, a warm bath and hydrate of chloral, particularly the latter, given either by the mouth or rectum, have been found especially serviceable. Bromide of potassium may also be used. For the sore throat which now commonly appears, because of the eruption attacking the mucous membrane of the mouth and fauces, mouth washes and gargles, containing either chlorate of potassa, biborate of soda, glycerole of tannin, etc., may be used. Small pieces of ice allowed to dissolve in the mouth, and acidulated drinks, are often very gratifying to the patient.

During this stage persistent insomnia and violent delirium often occur, and for their relief large doses of chloral and bromide of potassium are sometimes required. In administering chloral, it is well to remember that it is very irritating to the throat, and, therefore, requires to be largely diluted; or it may be given by the rectum, if thought preferable. When this condition of the patient is attended by a flushed face and bounding pulse, a brisk cathartic may be of service. Tartar emetic and sulphate of morphia combined in doses of one-eighth to one-half grain each, will sometimes produce sleep and quiet the delirium.

Not unfrequently the patient in his delirium becomes so violent, and sometimes manifests a suicidal tendency so strongly marked, that it is found necessary, both for the safety of the patient and the protection of the nurse, to make use of some artificial means of restraint. I have known strong and muscular patients in this state of mind to knock down the nurse, jump out of the window, and make their escape. I have also known suicide to have been committed while the attention of the nurse was directed to another patient. In order, therefore, to guard against such accidents, we are in the habit of using in the Municipal Hospital for this class of patients, a wide band made of stout webbing or canvas, loosely placed over the chest and fastened to each side of the bed. Smaller bands made of the same material and lined with chamois skin are buckled on the wrists and ankles and also made fast to the bed, allowing, however, a little motion of the limbs, so that the patient shall not be subjected to painful restraint. By this appliance we are able to confine the patient to bed securely, without doing him any personal injury.

With the view of preventing or relieving the excessive burning and itching, particularly of the face, forearms, and hands, some ointment, such as cold cream or cosmoline, may be used. My preference is olive oil and lime-water in equal parts. This mixture may be perfumed with cologne water if thought necessary, and applied from time to time with a large camel's-hair brush. Cloths wet with cool water and spread over the face and arms sometimes afford relief. The development of the eruption within the hard skin of the palms of the hands, tips of the fingers, and soles of the feet, not unfrequently give rise to excruciating pain. For this distressing symptom very great comfort may be found in the prolonged use of lukewarm hand- and foot-baths. Or the frequent application of flannel cloths wrung out in tolerably hot water is of great service.

Patients suffering from the hæmorrhagic type of small-pox usually die during this stage. I know of no treatment that possesses any power against this form of the disease; for in my large experience I have never seen a well-marked case recover. I have tried antiseptics, large doses of quinia, iron in different forms, and ergot, without seeing any appreciable good effects.

The most suitable diet at this stage of the disease is a liquid or soft diet. It should, however, be nutritious, as the patient has yet to pass through a severe ordeal in which his power of endurance will be severely tested. In varioloid the appetite during the eruptive stage is often good; such patients require but little treatment, and may be allowed almost perfect freedom in choice of diet.

4. *The Stage of Suppuration.*—The duration of this stage may be said to be from two to five days. It is at this period of the disease that the eruption reaches its greatest development; that the suppurative, irritative, or so-called secondary fever occurs; that the mucous membrane of the mouth, fauces,

and larynx, become most dangerously involved; that the vital powers of the patient are most severely tested, and his life placed in the greatest jeopardy. The indications, then, for treatment are to relieve the dangerous throat symptoms when they occur, to mitigate the fever, and to resist by every available means the tendency to death by exhaustion. For if life can be prolonged through this stage of disease, the chances for recovery then daily increase.

The throat symptoms are rarely entirely absent, even in varioloid; but in confluent variola the eruption upon the mucous membrane of the mouth and fauces is usually also confluent, and often diphtheritic. Mouth-washes and astringent gargles are, therefore, indicated. As such, a solution of chlorate of potassa, alum, or borax may be used. If there is fetor of the breath, carbolic acid may be added; or diluted chlorine-water may prove of service. Curschmann prefers a weak solution of liq. ferri sesquichlor.

To relieve the pain and difficulty of swallowing, small pieces of ice held in the mouth and allowed to dissolve slowly are often of great benefit. Iced lemonade and mucilaginous drinks, particularly flaxseed tea containing sugar and lemon juice, are usually very grateful to the palate. The ice-bag applied to the neck is often of very great service. On the contrary, some patients are benefited more by hot applications. Should œdema of the glottis occur, an emetic may be given if the patient is not too weak to bear its action, or we may resort to local scarification.

When the eruption in the fauces and larynx assumes the diphtheritic condition all the distressing symptoms peculiar to diphtheritic croup are developed; the local remedies to be made use of for this condition are, of course, quite similar to those recommended for the latter disease. In addition to some of the measures already suggested, steam, inhalations of hot water or of water and vinegar mixed, may be of service; likewise the vapor from slaking lime is sometimes useful. Lime-water in the form of spray has proved serviceable. Also spray-inhalations of lactic acid (grs. xx. to ʒi.) may be tried. When suffocation threatens, tracheotomy may be employed.

During the period of suppurative or irritative fever of confluent variola the temperature usually ranges from 102° to 106° Fahr. Any measure, therefore, capable of reducing the temperature will prove of great benefit to the patient. Quinia in large doses has been recommended, but I have not found it of very great service. Cool immersion baths have been tried and not found very satisfactory; besides the difficulty of getting the patient in and out of the baths, they do not afford much relief. Cold compresses and cool water squeezed from a sponge over portions of the body, are more easy of application and are sometimes serviceable. I have seen patients benefited in warm weather by being covered with a sheet wrung out in cool water and renewed from time to time, but such applications are usually not well borne in cold weather.

The suppuration which takes place at this stage of confluent variola from the innumerable pustules spread over almost all parts of the body is certainly very abundant. Watson says the quantity of pus thus produced amounts to quarts. This excessive drain upon the system and the extensive cutaneous irritation combine to exhaust the strength of the patient, and consequently a vigorously supporting plan of treatment is required. A plan of treatment aiming to supply nutriment equal to the loss sustained through the suppurative process, was presented as long ago as 1856 by Dr. Nebinger,[1] and very appropriately named by him "Compensative Nutritive Treatment." Dr. Nebinger writes:

"In carrying out this treatment, I have not found any diet so useful, so grateful to the patient, or any which gave as little inconvenience to swallow, when the mouth, fauces, and throat were studded with pustules, as a combination of eggs, milk, sugar, and ice, made in the proportion of one egg well beaten, half a pint of milk, sugar and ice in quantities suited to the taste and desire of the patient. When the necessity for stimuli has existed, as it does in all cases of the confluent variety of small-pox, I have added brandy, or, what I think better, Monongahela whiskey, because for purity it can be more safely relied on, and can be more readily obtained. The quantity of this diet which I direct the patient to use in confluent small-pox is half a pint, or a tumblerful, with a large tablespoonful, or half an ounce, of Monongahela whiskey added to it, every two hours or every hour and a half *during the day and night.* I have frequently had patients to take as many as twelve eggs, three quarts of good new milk, and eight ounces of whiskey daily for several consecutive days; and yet, with all this supporting and stimulating diet, this most excellent proteine or highly nitrogenized food, these poor fellows barely escaped sinking into the grave, some of them having had (notwithstanding they were so vigorously supported with food, and so actively stimulated) that peculiar feebleness and tremor which is always the unmistakable evidence of a breaking up of the vital forces—the threatenings of dissolution."

My treatment at this stage of the disease, so far as nutriment and stimulants are concerned, has been almost identical with that of Dr. Nebinger. I have never given, however, as many as twelve eggs to one patient in twenty-four hours. To an adult patient suffering from very abundant eruption, I direct that there shall be given every twenty-four hours from two to three quarts of milk, from one to two pints of beef-tea, from two to four eggs, and from six to twelve ounces of whiskey, the latter being given in the form of milk-punch. The eggs may be well beaten and drank with the milk (a little salt being added), or they may be given in the form of egg-nog. It is important that the nutriment should be given at short intervals, and by night as well as by day.

Tonics are also indicated. I am in the habit of using quinia in doses of two grains every three or four hours. Digitalis is often of great service to steady the heart's action. Cathartics should be avoided at this stage. Where there is constipation, a laxative may be given, or, what is preferable, an enema may be administered.

The local treatment of the skin does not require to be materially different from that already indi-

[1] Variola; its Nature and Treatment. (Read before the Philadelphia County Medical Society.)

cated for the third stage of the disease. When the odor is disagreeable, as it is very apt to be at the latter part of this stage and the beginning of the next, carbolic acid may be added to the mixture of olive oil and lime-water (x.–xx. gtts. ad ʒi.). When there is a strong dislike to carbolic acid some other disinfectant may be substituted. At the period of the disease just referred to, the odor is often horribly offensive. Very much can be done towards correcting this condition by spraying frequently the face and arms, and even the bedclothing, of the patient with a five-per-cent. solution of either carbolic acid or Labarraque's liquid. Bromo-chloralum and Platt's chlorides may, in suitable dilution, be used in the same way.

In order to disinfect the atmosphere of the room, fresh air is of first importance, though care must be taken to prevent a draft of air from blowing directly on the patient, especially during the decline of the eruption. Chloride of lime is commonly placed about the room by the family, and may be of some service. I am in the habit of suspending in the room a large cloth wrung out in a solution of carbolic acid (Calvert's No. 4), or liquor sodæ chlorinatæ, in the proportion of an ounce of either of these to a quart of water. Care should be taken not to overcharge the atmosphere of the room with the odors of the disinfectants, the object being simply to correct the bad odor and render the atmosphere more agreeable to the patient and attendants.

5. *The Stage of Retrogression or Stadium Exsiccationis.*—This stage is characterized by the drying of the eruption. It may be said to begin about the eleventh, twelfth, or thirteenth day, and it runs very gradually into the stage of convalescence. During the early part of this period of the disease, the treatment marked out for the previous stage should be continued. When the patient shows marked indications of improvement, the quantity of milk, eggs, and whiskey may be gradually diminished, and soft or solid food substituted. The tonic doses of quinia should be continued, and the muriated tincture of iron may also be given with advantage. Of course, the applications to the skin and the disinfectants should be continued as long as required.

When complications occur, it is usually at this stage of the disease that they make their appearance. The most common complication is corneal ulcer. When this is observed early, I have seen good results follow the use of the solid stick of nitrate of silver —it being brought to a fine point, and applied very delicately. Solution of atropia should then be instilled in the eye, and hot compresses applied. It often happens, however, that the ulcerative action cannot be arrested by any treatment, but marches rapidly on to complete destruction of the cornea, and iritis, and sometimes suppuration of the globe follow. Pneumonia or pleurisy occurs perhaps next in frequency. Their treatment should be conducted on general principles, except that bloodletting, general or local, is not warrantable.

6. *Convalescence.*—During convalescence, a general tonic treatment may be demanded. Very often, however, little or no medication is required, the patient having a good, even voracious appetite, and rapidly regains flesh and strength. But not unfrequently sequelæ appear at this stage and greatly protract convalescence. Of these, the most common are boils and multiple abscesses. Their treatment requires the application of hot fomentations until suppuration is established, and then the free use of the lancet. When these furuncular processes are numerous, and continue to be reproduced for a long time, I have seen good results follow the administration of Fowler's solution.

Erysipelas, also, not uncommonly occurs—more frequently, doubtless, in hospital than in private practice. The affection is usually amenable to the ordinary treatment: that is to say, thirty drops of muriated tincture of iron, repeated every three hours, and the external use of diluted lead-water, are very promptly followed by favorable results.

Night-sweats are sometimes complained of, and when they occur, may be successfully treated by aromatic sulphuric acid, atropia or belladonna. The latter is often especially serviceable.

When decrustation is slow in taking place, glycerine or cosmoline may be applied. Warm baths, frequently employed, very greatly assist the falling off of the crusts. After the removal of the scabs, we can do nothing to remedy the cicatrices; but sometimes warty nodules are left on the face, which may be benefited by painting them with tincture of iodine.

Patients who have recovered from small-pox should not be permitted to mingle with other persons until all the scabs have been removed, for these latter doubtless contain the contagion of the disease.

The Prevention of Pitting.—The question how to prevent pitting in small-pox has taxed the ingenuity of physicians of all ages. Various methods have been recommended—some, indeed, highly lauded—but I think the judgment of those who have had the greatest opportunities for observation will bear out the statement that the end aimed at is never attended with certainty. In order to accomplish this end it is necessary that the eruption should be checked in its course before it has reached the pustular stage; for the suppurative process is attended with destruction of derm tissue, and then cicatrization and cicatrices must inevitably follow.

All the methods most highly recommended have, in my hands, failed to produce any satisfactory results. I have never been able to make any decided impression on the eruption by the application of mercurial ointment. I have tried tincture of iodine locally in the papular stage of the eruption, and find that it not only fails to modify its course, but aggravates the inflammatory action of the skin. The evacuation and cauterization of the vesicles have not, in my experience, been followed by any very decided benefit; at any rate, the procedure is only practicable in mild cases, where there is the least danger of pitting. I cannot too strongly condemn the application of collodion or solution of gutta-percha, as they form an impermeable coating, prevent exhalation from the skin, and consequently greatly increase the suffering of the patient. I have about come to the conclusion that Gregory was not far wrong when he said, "There is no peculiar

method which can be devised for the prevention of pits and scars. The masks and ointments formerly in use for that purpose, and so highly vaunted, are, in reality, more hurtful than beneficial. The application of a little cold cream to the hardened scabs is all that can be recommended."

HOSPITAL NOTES.

PHILADELPHIA HOSPITAL.

(Service of J. WILLIAM WHITE, M.D.)

RUPTURE OF THE URETHRA FOLLOWED BY EXTENSIVE INFILTRATION OF URINE.

(Reported by C. J. SELTZER, M.D.)

ANDREW O., æt. forty-one, married, a pedler, was admitted into the wards of the Philadelphia Hospital January 24, very much exhausted and in stupor. No reliable history could be obtained from him further than that he had been drunk for some time up to six days before admission, during which six days he was lying in the condition he presented when admitted, and that he had but little medical attendance during that time.

The following was his condition after entering the ward: Pulse 120 to 130, rapid and feeble, intermittent, and at times almost imperceptible at the wrist. Respiration irregular, labored, and between 30 and 40 per minute. The breath had a peculiar sweetish odor. Tongue was pointed, dry, and brown. Teeth and lips covered with sordes. Examination of what the patient supposed to be hæmorrhoids showed a large slough in the right gluteal region, surrounded by numerous small abscesses and sinuses.

The perineum was very much swollen and distended, but no distinct fluctuation could be obtained. The inflammation and swelling extended from the anus to the scrotum, the latter but slightly involved. There was also a large ischio-rectal abscess. Pressure upon the perineum caused the urine to flow from a sinus, extending towards the rectum, but not communicating with any cavity, as far as could be ascertained.

A small flexible rubber catheter was introduced into the urethra to the depth of eight inches, meeting with no resistance. The bloody and purulent character of the urine, and the increased flow when pressure was made over the perineum, indicated that the catheter entered a false passage and not the bladder. The urine contained a large quantity of pus. In withdrawing the catheter, the urine continued to flow from it until about five inches of the catheter remained, when it ceased abruptly. Sensation had almost entirely disappeared from the affected parts.

After the administration of whiskey and digitalis at short intervals, the patient revived to some extent. Pulse became less frequent and stronger; respiration better. After careful etherization the patient was placed upon the operating-table in the lithotomy position, and perineal section performed by Dr. White. A metallic catheter having been introduced, a linear and deep incision was made into the centre of the perineum. A cavity filled with urine and pus was laid open, and its contents evacuated. The end of the catheter was found in this cavity, having passed out from the urethra on the right side between the spongy and cavernous bodies, and thence into the cavity between the bladder and rectum.

A catheter of small size was now passed into the bladder, and a large quantity of urine drawn off. The sloughing tissues were removed, sinuses and abscesses laid open, and a charcoal poultice applied. Stimulants were freely administered, and external heat applied. The catheter was retained, and the urine drawn off at intervals during the day.

The tissues from the scrotum to the rectum were discolored and gangrenous. Whether the abscesses existed before he went under treatment, or before infiltration of urine took place, it is impossible to say, since no history of his condition previous to admission could be obtained; but, as will be seen from the autopsy, it is probable that a false passage had been made during attempts at catheterization previous to his admission.

After the operation, and when the effects of the ether had passed off, the patient was able to answer a few questions about his condition as to pain or discomfort, and sensation was also re-established to some extent. Eight or ten hours after the operation coma returned and became profound, and remained so until death, which took place thirty hours after.

The following was the *post-mortem* condition: Upon laying open the abdomen, the surface of the intestines and wall of abdomen were found to be normal, as was also the liver; but when an attempt was made to remove the intestines, they were found bound down upon the right side by old, firm, and strong adhesions. Numerous cavities filled with pus existed throughout this region, and the surrounding tissues were matted and saturated with purulent fluid. The principal cavity was external to the kidney, between it and the peritoneum. This tract extended from the right kidney into the pelvis, in the course of and surrounding the ureter of that side. The pelvic cavity was filled with purulent fluid. The kidneys themselves were very much enlarged and white, and showed, microscopically, evidence of extensive parenchymatous nephritis. The left contained a little pus. Both ureters were dilated and enlarged, with thickened coats. The dilatation was greatest about the centre; the right more so than the left. The pelvic organs were also bound together by old adhesions. Neither of the cavities found in the abdomen had distinct or well-defined walls.

The bladder was very much hypertrophied and dilated, the mucous membrane lining it thickened and forming ridges which ran in various directions. The orifices of the ureters were enlarged and opened straight into the bladder.

An abscess seated in the middle lobe of the prostate communicated with similar ones in the lateral lobes. Pus also escaped from the follicles in the membranous urethra. Collections of pus were found in the tissues beneath the pubes and in front of the triangular ligament, also in the bulb.

By laying open the urethra its entire length two strictures were found; one, two and a half inches from the meatus, and the other five inches. Numerous lacerations in the first stricture showed that it had been forcibly dilated. This stricture was a membranous contraction, without any induration whatever. The second stricture was of an entirely different character, being indurated and hard to the touch, seven-eighths of an inch in depth, and situated in the spongy urethra, extending almost to the beginning of the membranous portion. Several fibrous bands crossed in the course of the stricture. Between this stricture and the bladder the urethra was unbroken, though slightly dilated.

The rupture took place at the beginning of the second stricture, on the right side, and entered the perineum between the corpus spongiosum and corpus cavernosum, five inches from the meatus urinarius. The principal cavity in the perineum extended from the seat of rupture, posteriorly, almost to the rectum. The bulb was dissected out by the infiltration, so that when the cavity was laid open it was entirely exposed to view. The cavity was almost completely upon the right side—the side upon which the rupture occurred.

MEDICAL PROGRESS.

TRICHINOSIS.—In a recent instructive lecture on the subject of trichinosis M. GERMAIN SÉE distinguished four clinical types under which the symptoms may manifest themselves. The first is the gastro-intestinal form, in which the affected individuals are seized with grave digestive troubles without apparent cause, epigastric discomfort and sense of distention, nausea, and vomiting. The times of the vomiting vary; sometimes they occur on the day on which the trichinous food was taken, sometimes they are delayed for four or five days. The vomiting is usually accompanied with diarrhœa, sometimes choleriform in character. Such symptoms, if slight, may be readily mistaken for a simple indigestion. If the nature of the disease is, however, suspected, the diagnosis may readily be made by the discovery of the entozoa in the stools. When the diarrhœa is excessive the symptoms may resemble those of cholera, but two distinctive characteristics are the excessive perspirations and considerable muscular prostration, which may even precede the onset of the diarrhœa. In the second, or rheumatoid form, muscular pains are the dominant symptom; muscular exertion is painful, and causes fatigue. Towards the eighth day the muscles become swollen, hard, and tender, and the flexors are always more affected than the extensors, and from the swelling of the muscles, shortening, and even a flexor contracture, may result. Painful trismus or difficult deglutition may be the effect of the presence of the trichinæ in the muscles of the jaw and pharynx, and the affection of the laryngeal muscles may change the voice, and that of the intercostals and diaphragm may cause a painful dyspnœa. With these are spontaneous pains, often severe, irregular in distribution, not corresponding to the course of the nerves, and constantly mistaken for rheumatism. In this form, also, there are usually initial gastro-intestinal troubles, which (as well as the prostration) should always arouse suspicion. The third and most characteristic is the œdematous form. The patients make their appearance with swollen faces, particularly the eyelids, and they complain of extreme prostration. The swelling may be bilateral or unilateral, and in the latter case is pathognomonic. This œdema, with normal heart and urine, with muscular prostration and initial gastro-intestinal troubles, should leave the diagnosis in little doubt. The last is the typhoid form, between which and enteric fever there are several analogies. There is continuous fever, considerable prostration, some dyspnœa, and much muscular pain. Three distinctive symptoms, however, are the profuse sweating, the œdema of the face, which is present in nine out of ten cases of trichinosis, and the brief duration of the pyrexia, which ceases although the other symptoms persist. The last is the gravest form, and death may occur in the second or third week with delirium or stupor, and the general aspect of a severe case of typhoid disease.—*Lancet*, Feb. 11, 1882.

AN ANTISEPTIC FOR INSTRUMENTS.—Dr. MATHEWS DUNCAN states that salicylic cream, composed of one part of the acid to four or five of glycerine or vaseline, is a valuable means of keeping sponges, tents, instruments, etc., aseptic in the vagina. It was first suggested by Dr. Ogsten, of Aberdeen.

TREATMENT OF RINGWORM.—In order to prevent the spreading of ringworm by contagion, and when occurring in children to prevent their losing their school hours by being kept at home, Dr. THIN recommends the covering of the head with an ointment. He reports a case in which for two months the patches were kept covered with fat melted with a sufficient quantity of white wax to give the mixture consistence at the temperature of the skin. During these two months the patches of ringworm remained absolutely stationary. The spread of the disease was at once arrested, although the spores present in the diseased hair-follicles still retained their vitality. The boy had a brother and two sisters, under the age of puberty, with whom he had constant intercourse, and no precautions were taken beyond his wearing a cotton skull-cap; but none of the others took the disease then or afterwards, when stimulating ointments were applied in order to effect a cure. —*Lancet*, Feb. 11, 1882.

CONGENITAL SACRAL FISTULÆ.—An interesting discussion occurred at a recent meeting of the Paris Société de Chirurgie on a point in teratology, which has attracted but little attention, viz., the curious congenital fistulæ which are met with in the neighborhood of the sacrum. M. TERILLON described three cases of this condition, and noted the occurrence, in connection with these fistulæ, of inflammation due to the accumulation of sebaceous material, just as inflammation from the same cause occurs at the umbilicus. In one case the fistula passed up to the bone of the sacrum, which was, however, not exposed. The matter which escaped from the opening contained much fat and squamous epithelium. After excision the walls were found to have a structure similar to that of the skin. M. FÉRÉ has examined a large number of children with reference to this question, and found in several a small depression in the corresponding position, and in two there was an actual cul-de-sac, about half a centimetre deep. Two hypotheses were put forward respecting the origin of these cavities. One regards them as an incomplete spina bifida, but against this is the fact of the integrity of the vertebral arches. According to the other theory, these fistulæ are relics of the "posterior umbilicus;" but authorities are by no means agreed as to the situation of this, some placing it in the middle of the vertebral column, others towards its lower part. M. DESPRÈS mentioned an instance of congenital tumor containing epithelial cells situated in this region. The frequency with which a caudal appendage or a tuft of hair was found in the neighborhood of these fistulæ was insisted on by M. GUÉNIOT. Similar cases were mentioned by CHAUVEL and POZZI, but no additional evidence was adduced as to their nature.—*Lancet*, Feb. 11, 1882.

INFLAMMATORY ENLARGEMENT OF BONES.—Mr. C. J. SYMONDS from a paper on this subject concludes: 1. That ostitis, even when central, is only attended with enlargement when the periosteum is involved. 2. That in all cases of primary synovial disease of joints, or of caries of articular surfaces, with secondary synovial disease, there is no enlargement of the bone. 3. That the enlargement of joint-ends in these cases is only apparent, and is explained by the unnatural prominence of the femoral condyles, owing to wasting of the thigh and to the thickening of the ligaments and synovial membrane. 4. That all inflammatory increase in the size of bones is due to periosteal formation, and that the uniformly cancellated appearance is due (*a*) to the widening from absorption of the spaces in the compact layer, whereby it becomes indistinguishable from the original cancellous tissue and the porous periosteal bone; and (*b*) to the remodelling of the compact layer when the ostitis has been superficial. 5. That the term "expansion" is misleading as applied to the results of the inflammatory processes in bone, since the widening of the spaces is an absorptive one.—*Lancet*, Feb. 11, 1882.

CHLOROFORM MORTALITY.—The number of deaths at present occurring from the administration of chloro-

form is so startling, that it is arresting public not less than professional attention. On Wednesday week last one of these fatalities occurred at Malvern Wells, and is a fair specimen of many more. The patient, Charles Holmes, a man fifty-one years of age, consulted Mr. HAYNES for dislocation of the shoulder. Mr. Haynes tried the usual modes of practice for reducing the dislocation without anæsthesia, but did not succeed, and, failing, determined to reduce under chloroform. He took every reasonable precaution before carrying out this intention. The examination of the heart gave no indication of disease, and there was no obvious reason why the narcotic should not be employed. It was also used with due care, but during the second degree of muscular excitement the patient became collapsed, and rapidly died. The *post mortem*, conducted by Mr. H. J. BROWN, of Worcester, revealed "long-standing structural disease," fatty degenerative change, we presume, of all the vital organs; so that "the man might have died at any moment." The class of case here presented is typical. There is a large population of this kind, a population of men and women, but of men especially, who, without presenting, even to skilled observation, their precise state, are liable to die at any moment. They die from slight mental shocks; they die from comparatively slight physical shocks; they die under efforts to run or climb; they often die in attempting to catch the train against time; they die in the most ready manner under certain of the anæsthetics. It is probable they are in danger under any of the anæsthetics which are as yet known, but it is certain that they are in great danger under every one of the class that belongs to the chlorine family. The chlorine, which really has nothing to do with the production of the anæsthesia, for that depends on the organic radical with which it is in combination, is the cause of the danger. It acts as an irritant. It produces sudden contraction of arterial fibre, arterial shock, by which the course of blood through the pulmonary and systemic circuits is impeded, and the feeble heart, unable to meet the difficulty, is arrested in its action during the second degree of anæsthetic sleep. The practical lessons to be remembered on this very solemn subject are always deserving of mention. In the first place, there can be no doubt that when any suspicion exists that life is not at its best, and that the heart is feeble, ether should take the place of chloroform. Ether relaxes, and for a case of dislocation is singularly superior to chloroform. If the administration of ether is, for any reason, not practicable in the class of case to which we refer, then the chloroform administration should be preceded by a full dose of some agent that has the relaxing effect of ether, and that agent we have at hand in ethylic alcohol. From one to two ounces of pure alcohol—specific gravity 830—is a valuable preliminary, and should be given diluted in eight ounces of water from five to ten minutes before the inhalation of the narcotic is commenced. With these precautions, the dangers of anæsthesia may be greatly reduced; and they ought to be rigidly followed until the time comes when science shall give to us a new agent that, with all the facilities of chloroform, in respect of convenient and ready administration, shall combine the safety, with something more than safety, of anhydrous ether.—*Lancet*, Feb. 11, 1882.

SORE NIPPLES.—Dr. FAVRE (*Petersburg. Med. Woch.*, Jan. 28), distinguishes two kinds of this lesion—fissures and erosions—and, believing that the latter are much induced by the modern tight-fitting dresses and the pressure of the corset, warns pregnant women against this mode of procedure. As a means of treatment he recommends the sprinkling the sores with bismuth, or employing this as an ointment, in the proportion of two drachms to half an ounce of vaseline. In some cases, twenty-four hours' application of this means has removed all suffering, and allowed suckling to be resumed.—*Med. Times and Gaz.*, Feb. 11, 1882.

HYDROPHOBIA TREATED WITH PILOCARPINE.—To prevent the multiplied trials of useless drugs, it is well to note the unsuccessful use of remedies in hydrophobia. A case in Paris has been reported in *La France Médicale*, in which pilocarpine was employed without apparently retarding for a moment the fatal result. The patient was a man, aged thirty-eight, who was bitten on the 23d of February by a rabid dog. The wound, which was situated on the hand, was cauterized by carbolic acid, and cicatrized slowly. For two months no symptoms appeared. Then a dull pain seemed to start from the wound and to ascend the arm to the shoulder and trunk. Two days later the first paroxysms occurred, and the disease ran a rapid course, with its customary symptoms. Six injections of pilocarpine were given, two centigrammes in each, and caused abundant salivation and less copious diaphoresis. When the effect of each was over, the patient experienced a notable relief to his sufferings; but the course of the malady appeared to be altogether uninfluenced. The salivation which was produced by the later injections was attended by terrible paroxysms of suffocation, followed, however, by distinct relief. The loss of liquid occasioned by the treatment increased the thirst; but deglutition was impossible. A tube was therefore passed down the œsophagus, and as much liquid as possible introduced into the stomach. The operation was well borne and, on repetition, the patient himself introduced the tube. Forty-eight hours after the commencement of the treatment the patient died suddenly. He was sitting on his bed, talking, when his head sank forward on his chest, he gave one or two inspirations, and was dead. Sudden death from cardiac failure is too common in hydrophobia for the result to be ascribed with certainty to the pilocarpine, but it should teach caution in the use of so depressing an agent in the disease.—*Lancet*, Jan. 21, 1882.

SCROFULA AND TUBERCULOSIS.—M. GRANCHER recently made to the Société Médicale des Hôpitaux of Paris an interesting communication on the above subject. The following are his general conclusions: 1. Tubercle is a fibro-caseous neoplasm, the development of which takes place in successive stages, during a longer or shorter period; this complete evolution may be accomplished in a few months, or it may last throughout the whole of life. It may, however, be arrested during the earlier stages, and never get beyond them. 2. Pathological anatomy and experimental pathology are to-day agreed to include under the term tuberculosis the greater number of affections called scrofulous, as *local* tuberculoses. 3. Lupus and superficial inflammations of skin and mucous membranes, the last resort of those who persist in regarding scrofula and tuberculosis as distinct, will probably be included in the same order in due process of time. 4. The necessities of practical medicine, which, after all, must first be reckoned with, do not permit all tubercular affections to be confounded together; on this account it is convenient to retain the word "scrofula" for those tubercular affections which are very slight and generally curable.—*Med. Times and Gaz.*, Feb. 11, 1882.

IODIDE OF LITHIUM.—Prof. DEISSE recommends the administration of iodide of lithium in the form of pills, in cases of syphilis, where iodine is indicated but where the idiosyncrasy of the patient prevents the use of iodide of potassium or the other ordinary iodine preparations. His formula is as follows: ℞. Iodide of

lithium gr. 23½, powder and extract of quassia enough to make 20 pills. One pill to be taken in the morning and evening. Iodide of lithium is very hygroscopic and must, therefore, be kept in closed boxes.—*Wien. Med. Zeitung.*, Jan. 21, 1882.

TREATMENT OF SEVERE EPISTAXIS.—Dr. THÉODOR ROTH recommends, in cases of epistaxis sufficiently severe and prolonged to endanger life, the use of acetate of lead associated with opium, administered in the following form:

Sub. Acetate of Lead, . . 0.12 centigramme.
Opium, ... 0.01 "
A powder to be taken every two hours.

The author adds that three grammes of acetate of lead, and 0.40 centigrammes of opium, should be taken in three days in order to obtain a complete cure.—*Rev. Mens. de Laryngologie, D' Otol. et de Rhin.*, Jan. 1, 1882.

TOXIC ACTION OF SALIVA.—M. GRIFFINI has undertaken to repeat the experiments of MM. Pasteur and Vulpian on the toxic action of saliva injected under the skin, and has communicated an article on the subject to the *Archivio per le Scienze Mediche*, t. v. He obtained both pure parotidean and mixed saliva, and injected both fluids beneath the skin in rabbits. He believes that pure parotidean saliva is perfectly inoffensive, that ordinary mixed saliva filtered through porous plates, so as completely to prevent the passage of microbia, does not produce any local gangrenous changes, but a general infection of the blood, resembling in all essential respects septicæmia. He has satisfied himself that it is the saliva, and not the microbia that it contains, which produces the septicæmic condition. Mixed unfiltered saliva contains much more toxic constituents, due probably to commencing putrefaction or to fermentation in the buccal cavity; hence, when this is subcutaneously injected, gangrenous complications occur with necrosis of the tissues and ordinary septic accidents due to the resorption of gangrenous products. M. Griffini considers that his experiments prove that the toxic action of saliva is due to a non-organized ferment.—*Lancet*, Feb. 18, 1882.

THE ETIOLOGY OF SCARLATINA.—Dr. EKLUND, of Stockholm, has for several years devoted much time to the study of the pathology and etiology of scarlatina, which is constantly present in the Swedish capital, and rarely absent from the barracks and other dwellings on the Isle of Skeppsholm. The results at which he has arrived cannot fail, if confirmed by other observers, to be of the highest practical importance as solving the connection, too frequently seen to be ignored or explained away, between bad drainage or other insanitary conditions and outbreaks of scarlatina, which otherwise must be admitted to have been produced spontaneously—*i. e.*, without actual infection. In the urine of persons suffering from scarlatina, he has constantly found a prodigious number of discoid corpuscles, oval or round, their diameter being less than $\frac{1}{1000}$ millimetre, or from a thirtieth to a tenth of that of a red blood-cell. They are colorless or yellowish-white, surrounded by a distinct cell-wall, and containing a well-defined nucleus of a deeper hue; sometimes one or more nucleoli may be seen. They exhibit rotatory or oscillatory movements, especially when a drop of water is added to the fluid. They multiply themselves, as he has frequently observed, by fission, first of the nucleolus, next of the nucleus, and finally of the entire cell. He cannot say whether they develop into a mycelium; at any rate, the presence of fine filaments seems to be exceptional. He has never seen them to adhere in moniliform chains nor massed as zooglœa. He considers them to be veritable *schizomycetes*, and proposes the name of *plax scindens*. But Dr. Eklund most positively asserts that he has found these identical organisms in vast numbers in the soil and ground water of the Isle of Skeppsholm; in the mud from the trenches dug for the water-mains; and among the greenish moulds of the walls of the old barracks, where scarlatina was most rife. Nay, more, he alleges cases of scarlatina occurring in children after drinking milk mixed with the ground water of the island, and one case which followed on immersion in one of these trenches, and the drying of the child's clothes in a small room. In still another case, scarlatina broke out in a block immediately on the exposure of the ground water by excavations around. Other observers have found micrococci in the animal fluids in scarlatina, but, even if they were shown to be invariably present in the disease, it would not prove that they were its cause. Still less can the connection of the extra-corporeal organisms with scarlatina be demonstrated by anything short of direct verification, by inoculation into a healthy body, carefully isolated from all other sources of infection. It is the absence of this last condition of scientific precision, which casts a doubt on all conclusions drawn from accidental, or, as Mr. Simon would say, popular experiments.—*Med. Times and Gaz.*, Jan. 28, 1882.

THE NERVE-ELEMENT IN WHOOPING-COUGH.—Of late years the profession has bestowed very little, if any, serious scientific attention on some of the commonest of common maladies. Whooping-cough is conspicuously among the neglected ills to which, notwithstanding the forgetfulness of the multitude of earnest clinical investigators, flesh is still heir. Many years ago the nerve-element in this troublesome and too often evil-working, if not in itself dangerous, affection, engaged much consideration, and treatment was specially directed to its relief. It would be well if the investigation of this feature of the etiology of the affection could be resumed. The fact that pertussis belongs to the class of maladies which are communicable and "catching" does not take it out of the range of probability that the specific action of a morbific poison on the nerve centres may be the efficient cause of the disease. Although the occurrence of the affection happening rarely more than once in the life of any individual may seem to point more directly to the fertilizing of latent germs in the organism than to any special excitation of the nerve centres, we do not, as yet, know enough of the *modus operandi* of morbific influences—"germs," or poisons, as we call them—in the blood and the tissues to define the part which the nerve centres play in the production of morbid phenomena. In any case, such relief is frequently obtained even in the earliest stages of whooping-cough from mild periodic counter-irritation over the whole length of the spinal column by a mustard poultice, which merely reddens the skin without vesication, that it would be well worth while to study this method closely from the therapeutic as well as the clinical standpoint. It certainly does good; but how? In cases where the mustard poultice, applied for six or eight minutes—not longer—over the whole length of the spine immediately before putting the child to bed every night, for a week, or, in seriously spasmodic cases, a fortnight, does not procure a permanent amelioration of the cough, the effect of this remedy is enhanced by sponging the spine with iced water quickly each successive morning. In cases where the paroxysms of cough seem to be repeated and to continue from sheer exhaustion of the nerve centres, coffee, administered as a drink, will often stimulate the energy of the centres, so as to put an end to the malady. These are practical points which require theoretical explanation.—*Lancet*, Jan. 28, 1882.

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SATURDAY, MARCH 11, 1882.

NEPHRECTOMY.

WE considered last week the subject of nephrotomy, but nephrectomy, or extirpation of the kidney, is so recent and so promising an operation, that it deserves a few words, especially as the first number of our weekly issue contained a notable case by Dr. T. Gaillard Thomas.

As America led in ovariotomy, so it has the honor of the first two cases of nephrectomy (though undesigned) by Wolcott, in 1861, and Peaslee, in 1868. But the first deliberate and intentional operation was done by Simon, in 1869. His work *Die Chirurgie der Nieren*, Martin's paper in Langenbeck's *Archiv.*, for 1879, Torres' Thesis, *Des Calculs des Reins*, Barker's two papers in the *Medico-Chirurgical Transactions*, for 1880 and 1881, Kroner's in the *Archiv. f. Gynäkol.*, vol. xvii., and several papers by Czerny and others in the *Transactions of the London International Congress of 1881*, with the reports of the various cases published from time to time in the *American Journal of the Medical Sciences*, are the best sources of information up to the present time. Czerny reports 74 cases, to which must be added one each by Thomas and Burgess, making 76 cases in all. Of these 10 are American and 66 foreign. How rapid has been the growth of the operation in favor, may be seen by the fact that up to 1875 Nepveu had collected only 14 cases, in 1880 Barker reported 28, and now we have 76. Czerny himself up to last August had operated 13 times with 7 successes.

One great fear had been that on the removal of one kidney the increased vascular pressure and extra work thrown upon the other, would induce disease, and especially albuminuria. Simon's careful preliminary experiments on dogs, confirmed by those of Torres, made this improbable, and the results of the now numerous operations in man have entirely dissipated this fear. The other kidney undergoes simply a compensatory hypertrophy. Moreover, no uræmia has followed, except in a few cases of absence or destruction of the other kidney, no hypertrophy of the heart, no shock from vaso-motor disturbance by a ligature so near the solar plexus and the aorta, in fact, no extraordinary effects whatever. The dangers are precisely those of ordinary surgical operations—no more, no less—and, in corroboration of the assertion of Torres, which we quoted last week, Thomas is undoubtedly right in saying, "that the operation is now one of the recognized and legitimate procedures of surgery."

It has been repeatedly performed on children, in one case at eleven months of age, and even, by Gilmore, successfully at the fifth month of pregnancy, without producing abortion.

It is not a little surprising to see how frequently a painful floating kidney has necessitated the operation, while neoplasms, fistulæ of the ureter, calculi, hydro- and pyo-nephrosis, and other similar conditions, at times, have led to it.

The question of the lumbar *vs.* the abdominal incision, is perhaps at present quite as important as that of diagnosis, and it is in the selection of suitable cases, and the appreciation of the conditions favorable to the one or the other method of operation, that immediate improvement of the operation lies. Floating kidneys and very large tumors, such as have been so frequently mistaken for ovarian or other tumors, can generally be removed most successfully by the anterior incision, and in this class most cystic, encephaloid, and other similar neoplasms, will be found. Moreover, the greater readiness of access to any neighboring diseased glands which ought to be removed, is an additional argument for this method. Czerny, however, in one case, reported by Braun, made a lateral incision, nine inches long, from the sacro lumbalis parallel to the border of the ribs, and was able to remove the tumor without wounding the peritoneum—a method which deserves future trial. On the other hand, if the perinephritic tissue be much thickened, and many adhesions have already been formed, the lumbar incision offers manifest advantages, both in access to the kidney and its vessels, and the operation is simplified by a simple enucleation of the organ from its capsule, leaving the inflammatory products behind, thus not interfering with the peritoneum. So, too, with smaller neoplasms, in which the glands are not yet probably involved, and in cases of pyo-nephrosis and calculus pyelitis, and of fistulæ between the ureter and internal organs, the kidney in this case being healthy and easily removed from its capsule.

The cases on the border line must be most carefully studied and reported, and with such care, we believe that nephrectomy will follow the improving path of ovariotomy to equal surgical triumphs.

Resection of a rib has been done in two cases in order to give greater room. Czerny once resected the eleventh and once the twelfth rib, both successfully. Barker, however, has shown that it adds little to the advantages of the operation and Dumreicher in prolonging his incision to what he took to be the twelfth rib, really reached the eleventh (the twelfth being rudimentary), opened the pleura and death followed from collapse of the lung.

The results thus far have been encouraging for so new and so serious an operation. Of the 76 cases 40 have recovered, 33 died, and 3 were under treatment. The results of the two methods of operation are, on the whole, largely in favor of the lumbar operation, doubtless from the nature of the cases suitable to it. The lumbar operations number 38 with 14 deaths, 36 per cent.; the ventral 33 with 19 deaths, 60 per cent. In 5 cases the result is yet undecided or the incision not stated. The mortality of the abdominal operations is, however, increased unduly by the fact that about half of them were undertaken with a false diagnosis. Not a few of them were unsuitable for operation and would not have been interfered with had the real nature of the case been understood.

THE PHYSIOLOGY OF THE SPLEEN.

IN spite of the numerous and valuable studies of which the spleen has been the subject, its function, with that of the other so-called ductless lymphatic glands, still remains involved in considerable obscurity. Its inclusion in the group of blood-making organs has been established beyond doubt, and Schönfeld and Tarschanoff have described its periodic changes in bulk, a relation being found by the former between changes in volume and changes in blood-making activity, while the latter, as well as Setschenoff and Sabinsky, have traced the relations between the size of the organ and various conditions of nerve influence. Some recent studies undertaken by Dr. Chas. S. Roy, on the characteristics of the normal splenic circulation, and the vaso-motor mechanism of the organ, published in the *Journal of Physiology*, January, 1882, promise to throw considerable light on this subject.

Dr. Roy's method consists in enclosing the spleen in a rigid metal box, of appropriate shape, filled with oil, and of such a construction that, while no hinderance is offered to the entrance and exit of blood by the splenic arteries and veins, any change in the volume of the organ causes a rise or fall, corresponding in extent, of a recording lever writing upon the moving paper of the kymographion.

Dr. Roy finds that the spleen is continuously contracting with a rhythm which, in so far as the element of time is concerned, is remarkably constant, averaging about sixty contractions an hour in the case both of dogs and cats. The extent or volume of the splenic systole is, however, subject to great variations. For although no pulse wave is evident, and only slight indications of a respiratory wave, the force of the muscular contractions, and hence the quantity of blood expelled from the spleen vary considerably. It is also interesting to note that, even when the general blood-pressure in the organ is greatly diminished, as by closure of the aorta, there is only a partial reproduction of the change in the spleen volume, indicating that the passages by which the blood enters the spleen are comparatively narrow, and that the mass of blood in the organ is practically cut off from the arterial system, and that, therefore, the circulation through the organ must be carried on almost exclusively by the rhythmical contraction of the smooth muscular fibres of the splenic capsule and trabeculæ, and not by the general blood-pressure. These experiments, therefore, indicate the existence in the spleen of a function hitherto unsuspected: that of propulsion of its own circulation; while they also show that the splenic systole may be an important element in the maintenance of the portal circulation.

As regards the vaso-motor mechanism of the spleen, Dr. Roy finds that stimulation of the vaso-motor centre, as by asphyxia, or direct stimulation, as has been pointed out by Tarschanoff and Setschenoff, causes a rapid contraction of the spleen, which Dr. Roy shows is not due exclusively to a contraction of the walls of the arterioles, but also to the contraction of the special muscular fibres of the organ. Reflex stimulation of the vaso-motor centre by stimulation of the central end of a sensory nerve, even after division of the splanchnics and vagi, produces analogous results, as also follow stimulation of the peripheral end of either splanchnic or vagus, though there does not appear to be any splenic vaso-motor "*tonus*" passing along these nerves, as their section is not followed by an expansion of the organ. These results also show that there must be a fifth path for the vaso-constrictor influences from the cerebro-spinal centres; and since section of the vagi and splanchnics does not interfere with the splenic rhythm, there must be some special mechanism in the organ itself by which its systole and diastole are regulated.

The importance of these investigations, and particularly the value of his method, is evident, and we trust soon to see the publication of his results on the action of different substances in the blood on the splenic circulation, as well as his deductions as to the bearing of these observations on the general physiology of the spleen.

THE PUBLIC INFLUENCE OF THE MEDICAL PROFESSION.

A PROFESSION so numerous, so well educated, and of such social and personal influence as ours, ought to exert a telling influence in questions affecting the public health. That it does not, is only too certain and too well known.

The reason why it does not is evident even to a superficial observer. No organized public effort is made to give voice to the opinions of those best qualified to direct municipal, State, or national action in such matters. Our medical societies hold their meetings privately, uninvaded by the otherwise ubiquitous reporter. No matter how valuable and striking the paper that is read, not the faintest echo is heard in the daily press, and yet it may be pregnant with truths the people should know, and treat of evils that are to be remedied, not by private admonition to individual patients, but by public legislation by bodies made up of non-medical men. Only in the medical journals are such papers published, read only by medical men, and then forgotten in the rush and hurry of the daily bread-winning work. Of course, we would not advocate the publication in the lay press of most professional papers. Not to speak of the seeming seeking for notoriety which often might fall into charlatanism, the object of such communications is chiefly our own instruction, and their subjects are often either unfit for general reading or uninteresting from their technicality. But we see the greatest propriety and advantage in giving publicity through the daily press to papers whose object is the destruction of municipal abuses that affect the public health, such as the condition of our streets and of our sewerage systems; the introduction of reforms, such as public supervision of house-drainage and plumbing; the prevention of diseases, such as small-pox, syphilis, and scarlet fever; the improvement of present methods of life in dress, food, nursing, bathing, care of the sick, care of children; the influence of school-life in the health of our millions of public and private school children, and many other subjects that will occur to our readers. On all or nearly all of these, the profession which knows most about them, nay, almost the only one which knows really anything about them, has no more public influence than so many lawyers, ministers, or merchants.

We hope, however, that better days are at hand. The action of the Philadelphia County Medical Society, in investigating the eyesight of our public-school children, and the pending public action on legislation as to syphilis, are steps in the right direction; while our brethren in New York, under the potent influence of Dr. Fordyce Barker, have also taken steps to make their influence felt. When the streets of that city last winter were active breeders of pestilence—and in what large American city are they not?—the voice of the medical profession, assembled as was eminently proper in a public meeting, was lifted in protest; and but a few weeks ago the *Tribune* gave an account, three columns long, of the meeting of the Academy of Medicine, at which Mr. C. F. Wingate, a Sanitary Engineer, read a paper on "Practical Points in Plumbing," followed by a discussion by Drs. Barker, Doremus, Parker, Janeway, and others.

Massachusetts, too, has destroyed the ancient abuses of the coroner, and has substituted the admirable system of medical examiners, chiefly through the influence exerted by the medical profession and the vigorous efforts of the *Boston Medical and Surgical Journal.*

We hope these good examples are but the forerunners of vigorous action. Not as theorists in speculations as to the influence of germs or malaria, not as Don Quixotes riding at every municipal windmill, but as thoroughly practical men, with the burden of the public weal upon our shoulders, surrounded by evil habits, evil traditions, evil modes of life, which it is our duty to better, let us speak, and speak loudly, and speak until we are heard.

Until some such public expression is given to the united opinion of the profession, we can do but little towards improving the public health and destroying the crying evils that exist on every hand. Not till then shall we do our duty as medical men to the public that will hear us if we will but make ourselves heard.

A SURGICAL MILLENNIUM.

IN the last volume of the *Medico-Chirurgical Transactions*, Mr. Spencer Wells gives the brief histories of two hundred cases of ovariotomy, completing one thousand cases upon which he has operated! A history like this is so novel that it deserves more than a mere statement. It is rare for any surgeon to do even a thousand ordinary operations, but a thousand operations such as ovariotomy, put him in a category apart from his fellows.

America anticipated him in the inception and early practice of ovariotomy, and Philadelphia and New York had no mean share in perfecting the operation; but we must all confess that to-day ovariotomy owes more to Spencer Wells than to any other one man. This one operation will make him famous for all time.

A review of such a useful life must be an immense and abiding satisfaction to him. He can well answer Mr. Mallock's question "Is life worth living?" His head never rests upon his pillow without the blessings of hundreds whose lives have been spared through his skill, and of thousands in whose hearts and homes he has made the noon-day sun to shine again. Twenty odd years ago, when he reported

his first modest roll of five cases, the ovariotomist was considered by many as an ogre, a murderer, deserving of indictment by law, a surgical pariah. But Mr. Wells has lived to see seven hundred and sixty-nine women snatched from the grave, and restored to useful and happy lives, the operation firmly established, and the mortality fall in his own hands from 34 to 11 per cent., and with a few operators even to 3 per cent. On the basis of the expectation of life of these one thousand patients, according to the English Life Insurance tables, Mr. Wells has added an aggregate of 17,880 years to human life; or considering only those who have recovered, he has given them 22,880 years of average health and happiness instead of the 3080 years of suffering and sorrow, which they would have had without the operation of ovariotomy. What a benefactor such a man is to the human race! What an ornament to his time, his country, and his profession! *Serus in cœlum redeat!*

IT is to be hoped, in the interests of science and of medical progress, that the anti-vivisectionists will continue in their present course of indiscriminate and illogical attack upon every prominent member of the profession against whom they can find or invent a pretext for directing their puerile abuse. After having picked up Mr. Jonathan Hutchinson on a charge of allowing a case of pemphigus to remain three days without active treatment, in order that it might thereby be made more instructive to the students, and having dropped him rather precipitately as being intellectually too warm for their handling, they have now flooded the papers with silly trash about the "unnecessary" experiments with aconitine upon mice, made by Drs. Dupré and Stevenson, in the Lamson case. As a London contemporary remarks, the grievance is not the cruelty of the practice, but the audacity of science "in venturing to do that in a questioning spirit which every housemaid is thought justified in doing under the plea of convenience, cowardice, or caprice."

Argument is wasted upon such persons, and vituperation would reduce us to their level. "Come, then, expressive silence!"

WE are gratified to learn, from the London medical journals, that the authorities have refused to comply with the demand of the counsel of "Dr." Lamson, the defendant in the now celebrated aconite poisoning case, that an analyst might, on the part of the prisoner, examine the viscera of the deceased. Our gratification is due, not to any ill-will towards the accused, although there is abundant evidence that he was, to put it mildly, an unqualified and unscrupulous practitioner, but to the fact that the principle involved is that which underlies the whole system of medical expert evidence. Professional testimony in all cases, and especially in those implicating human life, should be given neither for defence nor prosecution, but at the request and for the benefit of the court, and by men of such known skill and probity that their statements as to technical points will be unquestioned. To the present system of employing medical men as partisan witnesses, is due much of the popular opprobrium cast upon the profession, the members of which certainly never appear to less advantage, or inspire less confidence, than when contradicting one another in the witness-box. Our own self-respect should urge us to advocate a change, and to approve such action as the court has taken in this case.

AT the last meeting of the College of Physicians of Philadelphia, the most recent acquisition of the Mütter Museum, a series of twenty-four coronal sections of the brain, was exhibited, and elicited great interest and admiration. They proceed regularly from the anterior to the posterior surface of the brain. Each is beautifully mounted in a circular glass cell on a square plate of glass, so that both surfaces of each section or slab of the brain are visible, and the whole series is contained in a handsome locked case. The sections are preserved by Müller's fluid, and mounted in carbolized glycerin jelly, and are prevented from disturbance by a spring of whalebone, which gives gentle support. The preparations are the work of Dr. H. D. Schmidt, of New Orleans, and reflect the greatest credit upon his skill. They will be of especial value to students of the anatomy and physiology of the brain, and in locating any of its lesions in disease. The physicians and medical students of the city should be more familiar with the many and accumulating treasures of the Mütter Museum.

"MY wife," said Rev. Dr. Robert Collyer, at a recent meeting of the Brooklyn Maternity, "my wife is a prudent woman, and never praises me to my face, but she would tell you, I know, that as a nurse I am worth 80,000 trained nurses rolled into one." Aside from the preposterous exaggeration, the fact is that Dr. Collyer is *not* as good as a properly trained nurse. A husband, a wife, a daughter, may be moved by their deep affection to the utmost fidelity, but faithfulness can never replace knowledge. Indeed it is high time that the public should appreciate the fact that such earnest affection is generally a serious bar to the best service; for the greater the love the greater the anxiety, and the greater the anxiety the less the judgment, and on good judgment the patient's life may depend. A conscientious nurse will be as faithful as the most loving husband, and will have what he cannot have,

even if he "has had nine children," as the papers make Dr. Collyer say he has, and that is the trained eye and ear and hand, and above even them the skill and tact founded on teaching as well as experience. Nice appreciation of a patient's wants and needs and dangers require an unbiassed mind. Hence doctors rarely attend their own families, and hence skilled nurses are better than the best amateurs.

WE are glad to learn that at the March meeting of the College of Physicians, it was definitely determined to establish a Directory for Nurses in Philadelphia, substantially on the plan of the Boston organization. A committee, consisting of Drs. W. W. Keen, Albert H. Smith, and S. Weir Mitchell, was appointed to organize the Directory as speedily as possible, and to take the necessary steps to fit up rooms on the first floor of the College building as an office and residence for the Secretary of the Directory. So soon as the Directory shall be established, we trust that it will receive the heartiest support of the profession throughout the city and the neighboring towns.

IN an editorial on the subject of nerve-stretching in our issue of February 18, we spoke of the success had by Billroth and Nussbaum in bloodless nerve-stretching. We learn from a letter to the *Lancet* of February 11, that Prof. Trombetta, of Messina, first used this method in June, 1880, and, in July, 1880, published an account of it in a monograph.

REVIEWS.

DISEASES OF THE RECTUM. By WILLIAM ALLINGHAM. *Fourth Edition.* 8vo, pp. 332. Philadelphia: Presley Blakiston, 1882.

This treatise on fistula, hæmorrhoids, ulcer, stricture, prolapsus, and other diseases of the rectum, has been long and favorably known; the chief interest in the present edition lies in the certainty which it affords that more enlarged and extensive experience has not materially modified the views of the author as to the main points involved in the diagnosis and treatment of the various diseases of which he writes.

Probably the point of most general interest, as being still under discussion, is the treatment of internal hæmorrhoids and the comparison of the various methods as to safety and efficiency.

After a careful consideration of these operations, including excision, the use of the écraseur, the application of caustics, the injection of carbolic acid, the galvanocautery, the clamp and scissors with the actual cautery, dilatation of the sphincters, removal by the screw-crusher, and ligation, he gives his unqualified approval to the latter method, which he has employed 1600 times without one fatal result. He quotes from many eminent authorities in support of this position, and adds that he does not think that "in the whole range of surgery there is any procedure worthy of the name 'operation' which can show a greater amount of success or smaller death-rate than the ligature of internal hæmorrhoids." He speaks with almost equal force of the value of linear cauterization in procidentia recti, a method devised by Dr. Van Buren, but which the author has employed in a large number of cases. He very properly rejects the theory of M. Gosselin, supported by Dr. Erskine Mason, that rectal stricture is generally a result of chancroidal ulceration, and is disposed to attribute it in about half the cases to organization and contraction of a late syphilitic deposit, in the others to various local and constitutional conditions.

The book is still, perhaps, with the exception of Dr. Van Buren's treatise, the best guide in the diagnosis and treatment of rectal diseases in the language. Its typography and general appearance are, as usual, highly creditable to the publishers.

CONTRIBUTION À LA THERAPEUTIQUE CHIRURGICALE DES FISTULES VESICO-VAGINALES (Contribution to the Surgery of Vesico-Vaginal Fistulæ). By Dr. CAZIN. Reprint from the *Archives Générales de Médicine.* March and April, 1881.

The author gives four interesting cases. In the first he practised Lallemand's method of producing granulating margins by the thermo-cautery, and then on the twentieth day uniting them by wire sutures. The second and third cases are illustrations of a process which he terms "autoplasty by mobilization of the posterior wall of the vagina," a very ingenious method, applicable to very large fistulæ. First, the margins of the fistulæ are pared; next, the posterior wall of the vagina is dissected from the rectum in a flap which is cut through at its superior as well as, of course, at its inferior margins, while laterally it is left adherent to the recto-vaginal septum. The margins of the fistulæ and those of the flap are then united by sutures, thus closing the aperture. In order to support this displaced flap and to prevent strain on the sutures and contraction, he introduced a condom into the new vaginal path thus made, and distended it with air, replacing it later by a Gariel pessary. The result was completely successful. Satisfactory coitus was also possible, but he warned his patient that pregnancy must not follow. In the last case, æt. twenty-three, the fistulæ was attended with such contraction of the urethra and the vulvar outlet, that he deemed it better to close the vagina entirely, and after making a recto-vaginal fistula, to utilize the rectum as a bladder, fæces, urine, and the menstrual fluid all passing per anum. The urethra had already so contracted that nothing escaped by it, and to close the vagina was a matter of little difficulty. The result was most excellent. So many cases of this use of the rectum have now been reported that there can be no question of the entire propriety of it in suitable cases. In this country, Keen (Toner Lecture, No. V., 1876), Goodell (Lesions in Gynecology), and others have related very striking and successful cases, which should encourage further attempts in the same direction.

UEBER NASENBLUTUNG, NASENTAMPONNADE UND DEREN BEZIEHUNGEN ZU ERKRANKUNGEN DES HÖRORGANES.

ON EPISTAXIS, TAMPONNING THE NOSE, AND THEIR RELATIONS TO DISEASES OF THE EAR. By Dr. ARTHUR HARTMAN. Reprint from Knapp & Moos' *Zeit. für Ohrenheilk*, vol. x., 1881.

It is to be feared that in most cases of epistaxis an exact diagnosis as to the locality whence the bleeding comes is rarely made. The author teaches both didactically and clinically that careful examination may, and in most cases will, afford us a precise indication as to the source of the hæmorrhage. This occurs fortunately

most frequently from the front part of the nose, and especially from the septum or the floor of the naris, and rarely from the mucous membrane over the turbinated bones. If the exact source of the hæmorrhage can be discovered, he advises a tampon of absorbent cotton applied directly to the bleeding spot with pressure, or if a precise diagnosis cannot be made, that the naris be plugged with the cotton. He is averse to plugging the posterior naris with cotton, and especially if it be saturated with the liquor ferri sesquichloridi, not only on account of the disagreeable procedure necessary, but because of the liability of producing middle-ear disease, of which he gives three illustrative cases.

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, March 2, 1882.

FORDYCE BARKER, M.D., PRESIDENT, IN THE CHAIR.

THE paper of the evening, by FREDERICK A. CASTLE, M.D., was entitled:

Some Practical Suggestions in the Treatment of those Diseases of Women which every Physician may be called upon to Consider.—Dr. CASTLE apologized for formally appearing before the Academy to read a paper embodying points so disconnected, and apparently so trivial; but still, from the standpoint of the general practitioner, he hoped the time thus spent would not be entirely lost. Most physicians in general practice frequently have occasion to prescribe for women between thirty and fifty years of age, who are approaching the menopause. The troubles of which they complain are, for the most part, considered to be digestive. Almost the only account of the nervous phenomena incident to this period is to be found in the writings of Dr. Sidney Ringer, and is so graphic and truthful that he quoted it. Dr. Ringer extols the use of amyl nitrite in the treatment of these cases.

Dr. CASTLE had not used small bleedings or purgatives. He had tried the bromides, and found that large doses were necessary to allay the symptoms. He had tried amyl nitrite, but some four years ago began the use of arsenic, *liquor potassii arsenitis*, and had found it so efficacious that he had used it in every such case that had come under his care since that time. He did not know who originated this treatment.

The next subject considered was that of uterine displacements, which he confessed to some hesitation in calling attention to. No systematic writer, so far as he knew, had spoken of over-distention of the abdomen with flatus as a cause of prolapsus of the uterus; this he considered to be not an infrequent cause, and should be borne in mind in dealing with these cases.

That class of cases in which a retroverted or retroflexed uterus became attached to the anterior wall of the rectum by adhesions, was next referred to. The symptoms of this condition resembled those of stricture of the rectum. He had also noticed, as a symptom, periodic hæmorrhages taking place from the vagina.

The author of the paper demonstrated how, by oiling a hard-rubber pessary, and holding it over the flame of an alcohol lamp, it could be moulded into any desired form. He claimed originality for changing an ordinary hard-rubber Albert Smith retroversion pessary into an anteversion pessary by this means.

Dr. CASTLE next spoke of vaginal douches, and recommended as the most feasible method of irrigating the vagina, to have patients take a sitz-bath, and while so doing, inject with a syringe the water of the bath.

Dr. HANKS thought the points alluded to were of a practical nature. He was particularly interested in the first suggestion made, for he had found some difficulty in relieving the nervous troubles so frequently met with in women past forty years of age and under fifty. He was very happy to hear of a remedy he had never used, and would not fail to give it a trial.

In reference to one of the causes of prolapsus and retroversion of the uterus being a condition of intestinal indigestion, he thought many could bear testimony to the truthfulness of that statement. He had frequently found this causative factor among dispensary patients. When prolapsus existed, he usually found the patient the subject of constipation, indigestion, or dyspepsia. In regard to hæmorrhage being a symptom of retroversion of the uterus with fixation, he would say, that it might be present one, two, or three months, but after the inflammatory symptoms had subsided, it would cease to exist. In the treatment of these cases great care should be given to keeping the bowels regular. Applications of iodine were useful.

With reference to pessaries, Dr. HANKS said, I find the short anteversion pessaries, which simply pass up in front of the uterus, of little use, and in the vast majority of cases these so-called short anteversion pessaries do much harm when left undisturbed for a fortnight. From a long experience in Demilt Dispensary, and a somewhat shorter experience in the Woman's Hospital, and from my own private practice, I am *sure* I can successfully treat all cases of anteversion without pessaries, except when the anteversion is accompanied by prolapsus in the first degree. I am well pleased with the use of Thomas's *hinge-saddle* pessary, and I believe others will find it effectual. This pessary to which I refer is an Albert Smith, with a second piece for the cervix to set in, hinged to its wide extremity. It raises the uterus from the floor of the vagina, at the same time correcting the anteversion.

Dr. PAUL F. MUNDÉ said these minor details of gynecology form an interesting chapter, and to them he had given, for some years, a good deal of attention. The speaker referred to a lawsuit for damages brought by a lady about forty years of age, who had been the subject of a railroad accident. The symptoms of which she complained were those peculiar to the menopause. Being called to testify in the case, he attributed the symptoms as those incident to and dependent upon the menopause. Only three days previous, a case of tinnitus aurium was brought to him for examination of the uterus, in which that organ was supposed to be at fault. Upon examination no such difficulty was found to be present. Hence, he thought, care should be taken not to attribute too many nervous symptoms to the menopause. He thought the author of the paper laid too much stress upon dyspepsia and flatulence as a cause of prolapsus of the uterus. In dealing with adherent retroverted uteri, he had found that they gave rise to bearing-down pains, but he had never observed ulcerations.

Several years ago he modified the Albert Smith pessary as suggested by the author of the paper, and found it served an excellent purpose in cases of cystocele with a considerable degree of prolapsus. He had also found it was not without its dangers, for one of his patients, after wearing it three or four months, returned to him complaining of a good deal of pain, and upon examination it was found that the pessary was deeply imbedded in the vaginal walls. This is the trouble with all pessaries of a similar kind, except they were so soft as to yield to the pressure of the tissues. He had changed the hinge of Thomas's latest anteversion pessary, furnished with an open cup, sinking it into the bulk of the pessary. With this he was exceedingly well pleased. A patient of his had been wearing one of these pessaries for two years, taking it out every night and replacing it in the morning. It supports the fundus well and does

not get displaced. But there were two objections to it, one was it would produce abrasion of the anterior wall of the vagina, the other was that the menstrual discharges get in between the uterus and the cup, and give rise to a foul odor.

As to plugging the central hole of the nozzle of a vaginal syringe with a match, as recommended by the author of the paper, he had suggested that some seven years ago in a paper already published. He did not agree with Dr. Castle that the vagina was not an absorbent organ. It did not absorb as well as the rectum, but he obtained the soporific effect of the bromide of potassium when introduced into the system by vaginal injections. A certain amount of the injection would necessarily come in contact with the cervical mucous membrane, and that was more absorbent than the vaginal mucous membrane. As an evidence of its absorbent qualities, he cited the fact that a few minutes after applications of iodine to it, that drug could be tasted in the mouth.

Dr. THOMAS ADDIS EMMET said, I regret, Mr. President, that I arrived too late to hear the first part of the paper, and will hence confine my remarks to one point—displacements and pessaries. I think a great deal of the difficulty due to the fact that a correct diagnosis is not made to begin with. A great deal of ingenuity is wasted by not appreciating what we wish to do. I regard anteversion of the uterus as not a malposition of the organ. As to diagnosis, one of the commonest errors, I think, is neglecting to examine by the rectum, and to discover inflammation behind the utero-sacral ligaments. A very small amount of inflammation existing there, even though it may not produce extreme anteversion of the uterus, will produce symptoms recognized and attributed to displacement of the uterus. If inflammation exist behind the uterus, and we attempt to apply a pessary, and we cannot recognize this condition through the vagina, we will be disappointed in the use of any pessary. Another important point is to know whether to reduce a displacement or not, if any exist. The first impulse coming into the mind would be, probably, if the uterus be prolapsed, retroverted, or anteverted, to correct its position. To do so is, in my experience, one of the commonest of errors. If we have this inflammation behind the uterus, we have shortening of both broad ligaments, and the uterus must be retroverted or anteverted, and under these circumstances our pessary will do no good; but, on the contrary, a great deal of harm; so it is important to know just when to reduce a displaced uterus. If we can lift the uterus but a trifling distance, we can relieve all the symptoms attributed to anteversion, even though we antevert the uterus still more. This can be done by a pessary with a long enough curve in the posterior culde-sac, so as to lift the neck of the organ from the floor of the pelvis. If due to inflammation behind the uterus, a pessary will increase the difficulty. These cases are exceedingly difficult to treat if we cannot prevent the uterus coming forward. One point necessary is to make it a little wider than the vaginal outlet; or use a small India-rubber disk or plug of cotton—something that will raise the uterus just enough to restore the circulation. It matters very little what pessary is used, as long as you have a clear idea of what you want to do with it. With a very simple instrument the indications can be fulfilled, if it is but a pledget of cotton.

In regard to vaginal injections, I would simply say that if a woman will not take them lying down I would prohibit her using them. The position is of as much importance as the hot water. You must make use of posture to get rid of the engorgement. You might as well treat a case of varicose veins of the leg with that member hanging down. After a patient has remained in position, with her hips higher than the rest of her body, for a short time, use the douche, and you will give tone to the vessels. Much harm comes from the use of the vaginal douche in the upright position. I always direct my patients to pass the nozzle of the syringe to the opposite side from where the cellulitis is.

Dr. WM. T. LUSK said it was his misfortune to have heard only a small portion of the paper which had been read, hence he would base his remarks on the discussion which followed. About ten years ago, Shultz wrote an article in which he said that an anteverted uterus never gave rise to symptoms until the utero-sacral ligaments were involved. He liked the anteversion pessary shown by Dr. Castle. Anteversion pessaries could not be safely worn without removal from time to time. Excessive stretching of the vagina might give rise to local peritonitis.

The PRESIDENT, being called upon for remarks, responded, saying he would venture to discuss a few points brought out in the paper which seemed of great practical value, bearing upon just those questions which every practitioner is called upon to treat sometimes. First, in regard to functional disturbances associated with the menopause. He met with this class of patients almost every day. As to the remedies, the author of the paper had referred to purgatives, laxatives, and small bleedings. Now this form of treatment is very useful. He had not resorted to small bleedings. Purgatives administered once in about four weeks, to take the place of the drain which the system has been accustomed to for thirty or forty years, were very beneficial, especially in cases where there is a tendency to plethora. With some women, who up to this age have been thin, there is a tendency to get stout and fat. At periods corresponding to the time of the menstrual flow, they would have attacks of sleeplessness, palpitation of the heart, waking up at night with a feeling as if the heart's action would stop, which was owing to accumulations within the system not relieved by periodic flow. At these times a saline laxative administered for a few days acts well. But there was a class of cases in which such treatment would be worse than no treatment. These were patients with cold extremities and flushed face, due not to congestion but to exhaustion—vaso-motor disturbances. It is in this class of cases that the bromide of potassium, combined with tonics, is excellent. As to arsenic in these cases, he believed many present must have heard him recommend it as long ago as fifteen or twenty years. In some of these cases, we are apt to have small hæmorrhages from the vagina, amounting to very little in the aggregate, but continuing for days or weeks. For these he considered Fowler's solution of arsenic almost a specific. He thought it was a mistake made by most practitioners to regard the uterus as having a fixed locality. The position of the uterus is constantly changing, according to the condition of the bladder, intestine, and rectum. When we attempt to treat this condition, and establish a fixed theoretical point by means of instruments, he thought we were very apt to overlook this change in position, which was normal and physiological. For many years, when he had found a case of retroversion or prolapsus of the uterus, he had inquired into the condition of the digestive organs. By attention to the digestion, the removal of flatus, and correcting the condition of the bladder, many of these cases were relieved. In regard to pessaries, he would say he had never introduced one but twice; these were in old ladies suffering from cystocele.

Dr. CASTLE closed the discussion, and the Academy adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, March 2, 1882.

RICHARD A. CLEEMANN, M.D., IN THE CHAIR.

Mechanical Dilators in Gynecological Practice.—Dr. CHAS. H. THOMAS stated that he had used the Ellinger dilator, and had been very much annoyed by a bad fault in the form of the blades. As soon as the instrument is opened, the uterus shows a strong tendency to slip away from the dilator. This is due to the form of the outside edge of the blades, which gives to the dilator a wedge shape, with a difference of ten millimetres between the measurements of the base and apex. Conicity in uterine dilators is a dangerous quality; the instrument tending to slip in the direction of the base of the wedge. If the dilator, when in use, slips out of the grasp of the cervix, it is likely to produce laceration; while if it slip inward, as most dilators tend to do, it will wound the fundus uteri.

Dr. B. F. BAER made the following remarks: I am glad that Dr. Thomas has alluded to some of the defects of Ellinger's dilator. I have found the same objections, and have tried to overcome them by having an instrument so made that the mechanism by which the blades are separated is placed in the blades themselves, close to their points, and entirely concealed when they are in contact. This gives great power to a *small* instrument, and as the outer surface of the blades is perfectly parallel, and cannot feather, because of the position of the separating mechanism, the instrument does not slip out. I do not now need a tenaculum to hold the cervix in place, which is a great advantage. I have also had the handles bent down, so that I can see just what the instrument is doing; and, by a screw, so placed that it can be worked on the left, with the left hand, whilst the right hand holds the handles and separates the blades, the dilatation can be done slowly and deliberately, with less tendency to slip out, and with less pain than with the old instrument.

With regard to the result of dilatation of the cervix for the cure of sterility, my experience is based upon the treatment, by dilatation with the steel instrument, of more than two hundred women who were sterile because of a defect in the calibre of the cervical canal, either from stenosis or flexion, resulting from imperfect development. Where the sterility was the result of obstruction, dysmenorrhœa was almost invariably present. This experience leads me to the conclusion that, although the canal is made so patulous by dilatation as to markedly improve the dysmenorrhœa, and in many cases to cure it permanently, the sterility remains in the vast majority of cases, if the patient has been married more than three years before coming under treatment; and if she had attained the age of twenty-six or twenty-seven years before marriage, then, though she come under treatment immediately afterwards, she will very likely be sterile. This will apply to the great majority of cases, but not to all. I think the reason may be stated as follows: The long-continued hyperæmia of the uterus, the result of dysmenorrhœa, which probably existed from puberty, and especially from the non-fulfilment of the sexual function by conception, gives rise to such changes in the histological elements of the uterus that, instead of the organ being muscular, and, therefore, possessing its natural resiliency, elasticity, and suction power, it is hard, fibrous, and non-elastic. The mucous membrane lining the cavity also becomes so changed in its character that, if fecundation should take place, there is not a proper nidus furnished for the reception of the ovum, and it passes off without forming an attachment. The tissues of the Fallopian tubes are likewise changed, and the tubes narrowed in consequence. This might explain the persistence of the sterility after the dysmenorrhœa has been relieved by dilatation of the cervix.

Dr. J. C. DACOSTA has modified the Ellinger dilator by having the blades made very stiff and with a knob at the extremity, as in the uterine sound. When necessary he makes use of counter-pressure over the fundus. In some cases he uses a small instrument first, to enable him to introduce the more powerful one through the internal os.

Respecting the statement of Dr. Baer as to the incurability of sterility of three years' standing. He had recently had under treatment a lady, who had one child seven years ago, but had since been sterile; the uterus was sharply anteflexed; a dilator was used for the relief of the flexion, and three months later the patient exhibited all the early signs of pregnancy.

Dr. BAER remarked that this case was not one of the class to which he had alluded. This patient had had a child, and anteflexion, probably the result of sub-involution and endometritis, was the cause of the sterility. Failure occurs in cases which have never been pregnant, and in which the uterus is enlarged, hard, and changed in its histological character. He thinks it desirable to avoid multiplicity of instruments, and to have one dilator small enough to enter any os, and so arranged as not to yield to any pressure, but under all circumstances to preserve the parallelism of its blades.

Dr. THOMAS thought that one reason why the sponge-tent did good work, was because it worked slowly and continuously. Four years ago he made drawings of a modification of the steel dilator to accomplish the same end. The instrument was made somewhat shorter than the ordinary one; the blades were absolutely parallel on the outside edges and were approximated by means of a screw passing through a slot in one handle, and attached to the other, a milled-head traversed this screw and between it and the handle of the dilator was placed a spiral spring or a soft-rubber pad. This instrument was intended to remain *in situ* for twenty-four hours, the spring making the action gradual and continuous, one or two turns of the screw being given every two hours by the doctor, or a nurse properly instructed. The doctor thought that in this manner he could secure many of the advantages of the sponge-tent, and at the same time avoid its dangers.

Dr. R. P. HARRIS had recently seen in a foreign journal, diagrams of a very neat instrument intended to accomplish the same purpose. It consisted of a C-shaped spring, to the ends of which were attached blades long enough to pass through the internal os. The fingers pressing on the top and bottom of the C, closed the instrument for insertion. Its action would be regulated by the strength of the spring. To obviate the danger of slipping too far into the uterus, a dilator with diverging blades could be furnished with shoulders to rest against the cervix. The divergence of the points of the blades he considers an advantage. The feathering reduces the apparent divergence in use, and that which remains helps to retain the instrument in place, particularly if the blades are furnished with shoulders; the dilating power is greatest where it is most needed, at the internal os. To meet an objection advanced by Dr. Thomas, he suggested that the shoulders might be made movable to suit uteri of different depths. In every case in which a dilator is used, the patient should be kept in bed until the direct effects are over. He had recently under observation a case of dysmenorrhœa, in which the dilator failed, but in which a sponge-tent effected a cure.

Dr. BAER thought the blades should be parallel, and that dilatation should be uniform, without regard to the point of greatest constriction. Too much should not be expected from the dilator; a case of dysmenorrhœa could not be cured by one treatment; it is by the re-

peated use of the dilator at proper intervals that the best results are to be secured. As an instrument, it replaces a set of graduated sounds, and the original inventor must have had that object in view. The contractility of the uterus must be overcome gradually. Even when tents are used, contraction will recur. The advantage of the dilator lies in its comparative freedom from danger, and in being less troublesome to the physician. It is indicated whenever there is constriction from any cause; for if there is not good drainage for uterine discharges, there will surely be irritation, resulting in endometritis.

The effect of the dilator on hypertrophy is the same as with sterility. If of long standing, it is not curable; after the hard fibrous stage is reached, no reduction results from its use. But if the condition is recent, and the enlargement is of the muscular elements, or is due to engorgement, a cure may be secured, because here we have nearly the same condition which exists after labor, viz., a muscular uterus having the power to contract and involute. I do not believe that chronic hypertrophy of long standing will, as a rule, yield to any treatment, but the symptoms to which it gives rise can be relieved to a very great degree in most cases.

Dr. ALBERT H. SMITH regretted that Dr. Baer had not seen the admirable effects of the sponge-tent on uterine hyperplasia. If you use a steel dilator in the uterus, it can remain but a very short time, practically not more than five minutes, giving a sudden mechanical dilatation, accompanied by probable rupture of the hardened fibres of the cervical canal; but it cannot give that stimulation to the contractility of the uterine muscles and to cell action that results from the use of the sponge-tent when no inflammatory action is existing. There is great resistance at first, but after the lapse of forty-eight hours, the internal os and uterine walls have relaxed, spasmodic contraction ceases, and the vital power and muscular contractility of the uterus are developed by the presence of a foreign body which the natural powers will try to expel. Just as you have, after the expulsion of an ovum, a physical atrophy of the uterus, so you will have a similar action set up by the presence of a sponge-tent in the cavity of the uterus. No such result could be secured by the use of a steel dilator; the latter must lacerate and leave surfaces ready to absorb septic matter, while you have not the advantage of the presence of the salicylic acid or other disinfectant present in the tent; the latter, expanding slowly, is not likely to cause laceration. The too early removal of the tent, while the spongioles are fast in the uterine tissue, may leave an abraded surface; but after forty-eight hours the tissues have shrunk away, and the sponge comes away easily. Dr. Smith read the following letter from Dr. Mundé:

"My Dear Doctor: . . . Remembering your remark with regard to the absence of proper dilatation of tupelo-tents, I procured a number from Tiemann & Co., and dilated them in tepid water. I send you by this same post four different sizes, dilated and undilated, and also two perforated, zinc-lined tents, to be worn during the period, for dysmenorrhœa—one before, the other after, dilatation.

"This amount of dilatation was reached within one hour. Certainly no fault can be found with the expansion of these tents, since it will be seen on comparison that all the tents have swelled to fully double their compressed size, and have retained their expansion on being dried. It may be objected that this full dilatation would probably not take place if a resistance were offered as in the uterine canal. While I partly admit this, still I have within a month had reason to use the largest size to dilate a uterus, and secured quite as much expansion, as shown by the accompanying tent. The softness of the wood allows of their being whittled to any size and shape.

"I also send a tent dilated in utero, which shows some contraction at the site of the internal os.

"I presume that the failure of your tents to dilate may have been due to their having absorbed moisture from the atmosphere. They should always be kept wrapped in air- and water-tight paper. Tiemann & Co. tell me that all their tents are compressed to their utmost by machinery.

"As for the other forms of dilatation, I have used the steel, two-branched dilator of Ellinger almost exclusively. I found it too difficult to force the graduated hard-rubber sounds through the cervix if it is virginal and hard. The tenaculum tears out, and the force is too great. I have dilated in hospital and private practice (with two-branched dilators) in about one hundred and fifty different cases, probably some six to seven hundred times, chiefly for dysmenorrhœa and sterility, always in my office or dispensary. I have almost invariably relieved the dysmenorrhœa, temporarily, at least; the sterility but rarely, although my later statistics on this point are meagre. I have but one bad result, pelvic peritonitis, and then curetting and tincture of iodine to the endometrium were also employed, either of which might be blamed. I prefer steel divergent dilators for temporary, tupelo-tents for permanent, results. Slippery-elm-tents dilate but little, but I have found them good in dysmenorrhœa to render the canal patent."

Dr. R. P. HARRIS stated that he is using cylindrical sponge-tents, coated with salicylic acid, which he finds has a local anæsthetic effect on the lining membrane of the uterus.

Dr. A. H. SMITH said that of all the steel dilators which he has tried, he prefers the instrument devised by Dr. T. G. Thomas, in which the blades are separated by being drawn into a cannula by screw action. It is, however, difficult to clean. He has found the handles of Dr. Elwood Wilson's dilators very much in the way when the uterus is anteflexed.

Dr. BAER remarked that he was much instructed by Dr. Smith's remarks. He was surprised at the time—forty-eight hours—that a sponge-tent could be allowed to remain, and at its effect in the disintegration of abnormal tissue without the development of septicæmia. He finds it hard to believe a change could ensue after the uterine walls had been changed to hard fibrous tissue; but experience is the best teacher.

CORRESPONDENCE.

A NEW DANGER IN ANÆSTHESIA.

To the Editor of THE MEDICAL NEWS:

A case similar to the one related by Dr. George Fischer, in the *Deutsche Zeitschrift für Chirurgie*, 1881, vol. xv., p. 188, copied in THE MEDICAL NEWS of February 25, 1882, except, however, its fatal results, came under my observation during the late civil war, and is amongst my most vivid recollections.

Just after the battle of the North Nuna, in May, 1864, an officer was brought into the field-hospital with his arm shattered, and necessitating immediate amputation. Chloroform was administered in the usual way, and every preparation was made for the operation, when suddenly, at the period of complete anæsthesia, respiration ceased, the pulse had nearly gone at the wrist, and there was every indication of immediate death. His tongue was drawn out; exploration was made of the mouth and fauces, and a large quid of tobacco, seemingly as large as a large-size hen's egg, was discovered filling up the entire faucial space, and falling over on the larynx and glottis, and impeding res-

piration. It was removed with difficulty, the patient was resuscitated, chloroform was readministered, and the operation went on to completion successfully.

It would seem almost incredible that so large a piece of tobacco could have remained in his mouth unobserved, but the operation was performed after twilight, in the confusion of a recent engagement, and it had to be done by candle-light—hence the oversight.

S. J. RADCLIFFE, M.D.

WASHINGTON, D. C., March 3, 1882.

NEWS ITEMS.

BROOKLYN.

(From our Special Correspondent.)

THE METHODIST EPISCOPAL HOSPITAL, founded by Mr. George I. Seney, is to be constructed at once. It will occupy a full block of ground in the immediate neighborhood of Prospect Park. The completed structure will consist of ten distinct buildings, fronting towards the north—an arrangement adopted in order to permit of a southern exposure for the pavilion wards; in the centre a four-story administration building, in which also are situated several private wards and rooms, the nurses' dormitories, the chapel, and library; in the rear of this is the accessory administration building, containing the kitchen, laundry, etc.; flanking these are two-story pavilions, one on either side, with their service buildings; upon one side of these are to be placed the operating theatre, in the basement of which will be placed the dispensary, facing the north, and a mortuary building facing the south; beyond these is to be placed a one-story pavilion with its service building; beyond the other two-story pavilion is to be placed in front a children's and orthopedic ward facing the north, and a pavilion for contagious diseases facing the south; upon the farther extremity is the ambulance stable. The ventilation is to be accomplished by a combination of the fan and hot-air systems, a central chimney to communicate with a ventilating flue under each bed; there will also be arrangements for ridge ventilation. The buildings are to be heated by hot-air passed over steam-coils and by open fire-places. The hospital when completed will cost about $500,000, and will accommodate between 150 and 200 patients, allowing 1800 cubic feet of air to each patient. It will be built of brick with brownstone trimmings. The whole arrangement of the institution has been under the personal supervision of Dr. L. S. Pilcher, of Brooklyn, and Dr. A. E. M. Purdy, of New York, and is intended to embody all the more advanced views in the matter of hospital construction.

THE BROOKLYN EYE AND EAR HOSPITAL has also recently purchased a new building, which, with the land, cost them $50,000, one-half of which has been subscribed by Mr. Seney. It will be fitted up and ready for occupation during the present spring.

THE LONG ISLAND COLLEGE HOSPITAL has also been undergoing very extensive modifications—so much so that the original buildings can hardly be recognized. The hospital accommodations are very much increased and the facilities for instruction have been practically doubled.

BALTIMORE.

(From our Special Correspondent.)

WOMAN'S MEDICAL COLLEGE AND TRAINING SCHOOL FOR NURSES.—A Woman's Medical College has recently been incorporated in Baltimore. Associated with the College is to be a women's and children's dispensary and a training school for nurses. The following is a list of the faculty as far as completed: B. Bernard Browne, M.D., Professor of Diseases of Women and Children and Clinical Obstetrics; Thomas A. Ashby, M.D., Professor of Obstetrics and Clinical Gynecology; Randolph Winslow, M.D., Professor of Surgery; Eugene F. Cordell, M.D., Professor of Materia Medica and Therapeutics; Wm. D. Booker, M.D., Professor of Physiology; Robert B. Morison, M.D., Professor of Chemistry, Urinary Analysis, and Toxicology; Herbert Harlan, M.D., Professor of Anatomy and Clinical Surgery. The Chair of Practice will shortly be filled. The first course of lectures will begin October 1, 1882.

VIENNA.

(From our Special Correspondent.)

NOTES ON GYNECOLOGY.—Dr. M. Funk, Privat Docent, University of Vienna, Das Allgemein Krankenhaus, condemned severely a number of gynecological procedures common in England, but more especially practised in the United States.

Pessaries.—The universal and generally indiscriminate use of pessaries for all varieties and conditions of uterine versions and flexions, he censures as bad practice. Upon the employment of pessaries in this class of uterine disorders, he says:

1. In the great majority of cases, the abnormality, if it really be abnormality, cannot be corrected by the support of a pessary of any kind.

2. If the pessary be at all effective, it must cause so much pain, that it cannot be worn with any degree of comfort.

3. When correcting the position of the uterus, a pessary acts as a ligature around the cervix, impedes circulation and nutritive processes generally.

4. In a number of cases, he has observed the site of a pessary to be the starting-point of a carcinoma, though he is not at all a believer in the traumatic origin of that disease.

The Sound.—He objects to the use of the sound, so generally, as a means of diagnosis, as, also, to the too frequent introduction of the speculum. He claims that abdominal palpation, with digital examination sufficiently varied, is amply sufficient for the diagnosis of most uterine and vaginal disorders. The introduction of the sound he regards as invariably injurious, and in private practice rarely uses the instrument.

While upon the subject of speculums, Dr. Funk alluded indignantly to the assumption of Dr. J. Marion Sims, of New York, to the invention of the "duck-bill speculum." Metzler, of Prague, in 1846, used the same instrument which Dr. Sims claimed as original in 1850.

UTERINE AND VAGINAL CARCINOMA.—Dr. Funk has studied for many years, and under the most favorable auspices, the etiology of all forms of vaginal and uterine carcinoma. He sums up the results of over twenty years' observation, as follows:

1. Syphilis has no causative relation to cancer n these localities whatever, though I have seldom seen the coexistence of the two diseases.

2. Heredity in uterine cancer car . be shown by the most critical analysis of the cases, which I have seen. This point is one of much practical importance, as I have very frequently been consulted when the subject of matrimony has been discussed. In every case, I believe, I have relieved myself of grave moral responsibility by saying positively, there is absolutely no evidence of hereditary transmission of the disease. This, of course, I believe does not obtain in cancer occurring in other localities.

3. Parturition has been emphasized by Graily Hewitt as a cause of uterine cancer, but I must think entirely without foundation in truth. I have had extraordinary facilities for observation in regard to this point, in the

lying-in wards of Profs. Carl, and Gustav Braun, and Spaeth, and so speak with positiveness.

4. Traumatism is never the origin of cancer. I have seen, it is true, a carcinoma spring from the place where a pessary occasioned pressure. In that case, however, I am convinced the relation was only a coincidence.

5. Acute and chronic inflammation connected with the female sexual organs, of all forms and conditions, occur so frequently in the Viennese prostitutes, of whom you very well know we have great numbers, without eventuating in any more serious disease, that I am convinced they are never the starting-point of cancer.

At present, I am not in a position to offer any theory as to the etiology of carcinoma in connection with the female sexual organs. All I can do is to criticise the asserted causes and await developments.

MILAN.

(*From our Special Correspondent.*)

THE SANTA CATERINA LYING-IN HOSPITAL.—During 1881, in this hospital, there have been 290 deliveries, of which 220 were natural and 70 preternatural. The latter required the performance of 77 operations, as follows, viz.: Reposition of the funis by mechanical appliances, 1; forceps in failure of expulsive power, in the cavity of the pelvis, or at the inferior strait, 22; forceps at or above the brim in cases of pelvic deformity, 6; extractions in pelvic presentations, 6; turning, 12; induction of premature labor, 11; induction of abortion in cases of pelvic deformity, 1; craniotomy, 7 (all saved but 1); evisceration in transverse presentations with impaction, 3 (all saved); craniotomy and evisceration of the trunk, 1 (saved); Porro-Cæsarean sections, 2 (both saved); incisions of the os uteri for rigidity, 2; artificial delivery, 3.

Amongst the 290 cases, there have been 4 cases of eclampsia and 7 of placenta prævia. Nine of the whole died, from the following causes, viz.: Nephritis, 3; heart disease, 1; as the result of a podalic version made by a physician at home, 1; pleuritis, 1; and septic infection, 3.

THE OSPEDALE MAGGIORE.—Here the first successful ovariotomy was performed on October 2, 1881.

PROCEEDINGS OF THE IOWA STATE MEDICAL SOCIETY.—The Thirtieth Annual Session of the Iowa State Medical Society was held in Des Moines, January 25–27, 1882. The Society was called to order by the President, Dr. T. J. Caldwell, on Wednesday, January 25, at 10 A.M., and was opened with prayer by Bishop J. F. Hurst, D.D., after which the President delivered his annual address.

During the session almost fifty members were added to the roll. The total attendance was about two hundred.

The following papers were read, discussed, and referred to the Committee on Publication: "Inversion of the Uterus," by Dr. J. A. Blanchard, of Des Moines; "The Plea of Insanity," by Dr. A. Reynolds, of Clinton; "A Small-pox Hospital," by Dr. R. J. Farquharson, of Des Moines; "Disappointments of Country Physicians in the Practice of Gynecology," by Dr. J. Williamson, of Ottumwa; "Pyelitis occurring during the Puerperal State," by Dr. L. C. Swift, of Des Moines; "Management of the Newly-born Infant," by Dr. G. W. Beggs, of Sioux City; "The Diseases Incident to Military Prisons and the Influences by which they are Modified," by Dr. Wm. Watson, of Dubuque; "Operative Procedures in Corneal Lesions," by Dr. C. M. Hobby, of Iowa City; "Local Treatment of the Mucous Membrane of the Air Passages," by Dr. E. H. Hazen, of Davenport; "Life—What is It?" by Dr. J. B. Gorrell, of Newton, "Microscopy," by Dr. J. J. M. Angear, of Fort Madison.

The following officers were elected for the ensuing year: President, Dr. D. Scofield, Washington; Vice-Presidents, S. E. Robinson, West Union; H. L. Getz, Marshall; Secretary, J. F. Kennedy, Des Moines; Assistant Secretary, D. McCrea, Council Bluffs; Treasurer, G. R. Skinner, Cedar Rapids.

The following changes were made in the Constitution: Annual meetings shall be held hereafter on the third Wednesday of May in each year, except when the sessions of the American Medical Association include this date. Then the President shall name the day, which shall be within two weeks of the third Wednesday in May.

The annual dues to be paid by permanent members were reduced to one dollar.

The Society adjourned to meet at Council Bluffs in May, 1883.

THE PUBLIC HEALTH.—For the week ending *February 25*, we report the following additional items: Small-pox caused 7 deaths in St. Louis; 3 each, in New Orleans and Hudson Co., N. J.; 2 each, in Omaha, Nebraska, and the District of Columbia; and 1 each, in Detroit and Buffalo. Hudson Co., N. J., reported 3 deaths from cerebro-spinal meningitis; Davenport 2; and St. Louis, Detroit, Buffalo, and Salt Lake City, each 1 death from this cause. There were 9 deaths from diphtheria in Brooklyn, against 23 for the preceding week; 4 in Buffalo and the District of Columbia; 3 each, in Detroit and St. Louis; and 2 each, in Hudson Co., N. J., and San Francisco. It is to be noted that not a death from this disease occurred in New Orleans during the week. There was a slight diminution in the number of deaths from scarlet fever in Brooklyn, where this disease has of late been unusually prevalent. The record of deaths from this cause for the week is as follows: Brooklyn, 27; Buffalo, 9; Hudson Co., N. J., 6; San Francisco, 4; New Orleans, St. Louis, and the District of Columbia, each 3; and Detroit, Davenport, and Omaha, Nebraska, each 1 death. Malarial fever is prevalent in St. Louis, 7 fatal cases being reported in the week. A marked accretion in the number of deaths (10), from puerperal diseases is noticed in Hudson Co., N. J. Of the whole number of deaths (14), in Salt Lake City, 4 were caused by pneumonia, which is 28.57 per cent. of the total mortality; consumption caused only 1 death.

For the week ending *March 4*, the deaths caused by some of the principal diseases were as follows: Of the eighteen prominent cities throughout the country from which reports have been received, death from small-pox occurred in eight. Cincinnati heads the list with 27 deaths from this cause; then in order follow Pittsburgh, 19; Philadelphia, 14; New York, 14; St. Louis, 8; Memphis, 2; Wilmington, Del., Milwaukee, and Dayton, O., each 1 death. Cincinnati, Milwaukee, and St. Louis, each report 2 deaths from cerebro-spinal meningitis, and Indianapolis 1 death from this cause. There has been a falling off in the deaths from diphtheria in Boston, 9 deaths being reported this week, as compared with 14 for the preceding one. There were 13 deaths from this cause in Philadelphia, an increase of 1 over the preceding week; 4 in New Haven; 3 in Indianapolis; 2 in Milwaukee, and 1 each in Providence, Pittsburg, Cincinnati, St. Louis, Charleston, and Savannah. Only five out of sixteen prominent places report deaths from scarlet fever, and in none of them is the disease prevalent: they are Philadelphia, which reports 4 deaths, and Boston, Charleston, Pittsburg, and St. Louis, 1 death each. No reports have been received from New York or Brooklyn. Typhoid fever

caused 8 deaths in Philadelphia; 3 in Pittsburg; 3 in Cincinnati; 2 each in Boston, Indianapolis, and Wilmington; and 1 each in Louisville, Charleston, Savannah, and New Haven. Malarial fever is still prevalent in Memphis, Tenn., and in St. Louis, 3 deaths having occurred in the former city and 4 in the latter, during the week. Providence, R. I., and Wilmington, Del., both report a number of deaths from whooping-cough. Acute pulmonary affections are prevalent in Boston, Philadelphia, and St. Louis. Of the total number of deaths for the week, consumption caused 19.93 per cent. in Boston; 18.76 per cent. in Philadelphia; 24.44 per cent. in Louisville, Ky.; 16.58 per cent. in Cincinnati; 26.66 per cent. in Nashville, Tenn.; 5 per cent. in Memphis, Tenn.; and 3.84 per cent in Wilmington, Del.

HEALTH IN MICHIGAN.—The Bulletin of the State Board of Health reports that, for the week ending February 25, 1882, neuralgia, intermittent fever, bronchitis, consumption, and rheumatism have considerably increased, and that pneumonia has considerably decreased in area of prevalence.

Including reports by regular observers and by others, diphtheria was reported present during the week ending February 25, and since, at 31 places, scarlet fever at 19 places, measles at 9 places, and small-pox at 8 places, in all as follows: at Spalding, Menominee Co. (9 cases), February 21; among the Indians near Spalding (8 cases), February 21, and 22 deaths to that date; at Detroit and Grand Rapids (convalescent), February 25; at Parkville, St. Joseph Co., February 28; in Kimball and Port Huron townships, St. Clair Co., February 28; at Stanton, Montcalm Co., February 28, 1882.

THE MEDICAL DEPARTMENT OF WOOSTER UNIVERSITY, Wooster, O., has been reorganized by the appointment of the following faculty:

Leander Firestone, M.D., LL.D., Dean, Professor of the Medical and Surgical Diseases of Women; Akin C. Miller, M.D., Registrar and Treasurer, Professor of Obstetrics and Clinical Gynecology; Frank J. Weed, M.D., Professor of Principles of Surgery and Didactic Surgery; X. C. Scott, A.M., M.D., Professor of Ophthalmology and Otology; J. E. Burns, M.D., Professor of Diseases of Children; Reuben A. Vance, A.M., M.D., Professor of Operative and Clinical Surgery; [1]Professor of Principles and Practice of Medicine; Theodore A. Weed, M.D., L.R.C.P., London, Secretary and Professor of Thoracic Diseases and Physical Diagnosis; Jamin Strong, Jr., M.D., Professor of Nervous and Mental Diseases; George Mitchell, M.D., Professor of Materia Medica and Therapeutics; [1]Professor of Anatomy; H. C. Foote, A.M., Professor of Chemistry and Toxicology; L. B. Tuckerman, A.M., M.D., Lecturer on Physiology; Demonstrators of Anatomy, Robert D. Alton, M.D., William C. Craven, M.D.

GENEROUS GIFT TO THE COLLEGE OF PHYSICIANS, OF PHILADELPHIA.—Dr. Weir Mitchell has recently presented another thousand dollars to the College, the income of which is to be used for library purposes. By direction of the College this sum has been added to the "Weir Mitchell Library Fund."

COLLEGE OF PHYSICIANS AND SURGEONS, OF CHICAGO.—We understand that Drs. J. J. M. Angear and A. M. Carpenter have resigned their professorships in the College of Physicians and Surgeons, of Keokuk, and have accepted, respectively, the chairs of the Principles of Medicine, and of the Practice of Medicine, in the Chicago College, which has just been organized.

[1] The vacancies appearing in the above list will be filled before the beginning of the session.

GRADUATES IN MEDICINE.—At the annual commencement of the College of Physicians and Surgeons, of Keokuk, Iowa, held February 21, the degree of M. D. was conferred on 122 graduates—the largest class the school has ever had.

At the Annual Commencement of the Medical Department of the University of Louisville, held February 28, the degree was conferred on 96 graduates.

At the annual commencement of the Medical College of South Carolina, held at Charleston on March 1, the degree was given to 19 candidates; and

At the Commencement of the University of Georgia, at Augusta, on February 28, the degree was conferred upon 23 candidates.

ANALYSIS OF ELEPHANT'S MILK.—The birth of Barnum's baby elephant has afforded an opportunity of obtaining the milk of that animal, and Prof. Doremus has made an examination of it. "When first I examined the specimens, they seemed watery," he said, a few days ago, to the reporter of the New York *Tribune*, who interviewed him, "but after allowing the milk to stand, I could not help wondering at the large percentage of cream. The following represents the daily diet of the mother: 3 pecks of oats, 1 bucket of bran mash, 5 or 6 loaves of bread, ½ bushel of roots (potatoes, etc.), 50 to 75 pounds of hay, and 40 gallons of water. The last specimen of milk I obtained exceeded the others in quantity, and would, therefore, be the fairest for a test. It took several milkings to get even these, for the calf would begin to nurse, then stop, and when she stopped, the flow of milk did, also. The analyses of the samples gave the following results:

	First.	Second.	Third.
Quantity.	19. C. C.	36. C. C.	72. C. C.
Cream	52.4 vol. p. ct.	58.	62.
Reaction	Neutral.	Slightly Alkaline.	Slightly Acid.
Sp. Gr.			1,023.7

In 100 Parts Weight.

Water	67.567	69.286	66 697
Solids	32.433	30.714	33.303
Fat	17.546	19 095	22.070
Solids not fat	14.887	11.619	11.233
Caseine }	14 236	3 694	3 212
Sugar }		7.267	7.392
Ash	0.658	0.658	0.629

"It is evident, from these analyses, that the milk approaches the composition of cream. The milk was pleasant in flavor and odor, and very superior in these respects to that of many animals. The fat is a light yellow, resembling olive oil; is very pleasant in odor and taste, is liquid at common temperatures, but solidifies at 10° Centigrade, or 64° Fahrenheit. From whatever standpoint, therefore, we view the lacteal products of these four-footed giants, we are fully warranted in ascribing to it not only extreme richness, but also great delicacy of flavor."

We are glad to learn that Prof. Doremus, while on the visit, during which he made the above analysis, fortunately escaped serious injury from a most unexpected and violent assault by the father of the baby elephant. The elephant seized him around the waist with his trunk, and swung him violently against the side of the room. He owes his escape to the ready aid of the keeper, and suffered only a slight wound in the head. Elephants evidently do not respect professors as they ought to.

"GROUND-AIR."—Few persons realize the important influence on health of "ground-air," that is, the air contained in the soil. Yet, in an address before the Association of German Naturalists and Physicians, last

September, and published in the January number of the *Popular Science Monthly*, Dr. Max Von Pettenkofer states that so great is the porosity of the ground on which we dwell, that "heavy, towering buildings often stand on a soil which is filled to the extent of a third of its volume with air." This air contains not only far more carbonic acid than the air of the atmosphere, but also many deleterious emanations from the soil, which enter our houses, not in small quantities, but, as it were, by wholesale. "While the house is heated in the cold season, and at night in the summer, while the air within-doors is warmer than the surrounding out-door air, the houses act as draught-flues, and suck air out from the ground as if they were cupping-glasses set over it."

THE RIGHTS OF MEDICAL EXPERTS.—The *Boston Medical and Surgical Journal* reports a decision of interest to physicians, which has been recently given in the Superior Court at Boston. A lady received a severe injury resulting from a defect of a street in Lynn, Mass., and after a long contest, involving four trials, succeeded in recovering heavy damages. At three of these trials her attending surgeon was called as a witness, and was examined not only as to knowledge of the facts in the case, but also as an expert on the anatomy of the part injured, the probable results of the injury, and the prospects of the patient's recovery, and was also consulted on these matters by the plaintiff's counsel before the trial, a promissory note being given for his professional opinion. Payment of this note was afterwards refused, on the ground that there was no legal consideration for their promise to pay, holding that a medical man is bound to testify to anything he may happen to know relevant to a case in court, whether it is a matter of fact in the particular case, or of general professional knowledge or opinion. The court, however, disallowed this defence, and ruled that a physician is not bound to give his professional opinion for nothing in court any more than elsewhere, and the jury found a verdict for the full extent of the claim. Although this decision was not given in the highest State court, it affords a precedent which will probably be followed, although in other States there is a conflict of authority on this point.

SURGICAL TRIUMPHS.—Prof. NUSSBAUM has just published a very interesting address delivered on the anniversary of the hundredth birthday of Philipp Franz von Walther, who was born in 1782 and died in 1849. After an interesting account of his life and work, Nussbaum makes a rapid survey of progress since Walther's day. Anæsthetics, antiseptics, and bloodless operations, are all advanced as surgical triumphs. Of ovariotomy he says, "About 40,000 years of life have already been gained for women by successful ovariotomies;" and he believes that lives will be saved and much suffering prevented by Hegar's operation of removing the ovaries to anticipate the climacteric age in women, the subjects of bleeding uterine fibroids. The cure of reflex epilepsy by nerve-stretching he regards as a great advance in therapeutics. Excision of a kidney, or of the spleen, of parts of a cancerous bladder or prostate, of the rectum, and of the pylorus, he also regards with confident hope of improving results; and he believes it "not quite impossible that diseased portions of lung may be successfully excised." Our German colleagues are certainly not behind us in courage and adventure. —*British Med. Journ.*, Jan. 14, 1882.

A TERATOLOGICAL CURIOSITY.—According to the *Presse Médicale Belge*, two united children have been recently exhibited in Vienna which surpass in interest the celebrated Siamese twins. They were born in 1877, at Lacona, in the province of Turin. They have each a well-formed head, and perfect arms, and a separate thorax with perfect internal viscera. At the sixth rib, however, they unite, and there is but one abdomen, one anus, one right, and one left leg. There is a penis and corresponding scrotum, but behind the latter there is a rudimentary male organ, by which a few drops of urine escape. From behind, two vertebral columns are seen, two sacrums, and three buttocks, the central one evidently being due to the fusion of two, and in it is a rudimentary anus. The true anus serves for both children. Each individual has power over the corresponding leg and not over the other; thus the right leg obeys the will of the right twin named Baptiste, the left that of the other twin named Jacob. Walking is therefore impossible, although the legs are strong. Each child is said to possess a distinct moral personality. Sometimes one is laughing when the other is crying; one may sleep while the other is awake. Usually the head and face of each is inclined laterally, but if one is held perpendicularly the other becomes almost horizontal. The condition of sensation in the legs is not stated in the account.—*Lancet*, Jan. 21, 1882.

HYGIENIC VALUE OF THE ELECTRIC LIGHT.—The French scientific journal *La Nature* summarizes a communication from Dr. Javal, who believes that the electric light is absolutely without danger to the sight, in consequence of the amount of division which can now be obtained in it. *L'Union Médicale* also reminds its readers that similar researches of great interest from a scholastic point of view were published in that journal in May and July, 1881, including the researches of Dr. Cohn, of Breslau, who found that the electric light increases sixfold, as compared with daylight, the perception of yellow, and doubles the perception of green and blue. The observations of Dr. Blasius and Dr. Hoppe, in a discussion which took place at a meeting of the Brunswick Society of Natural Sciences, are also noteworthy. These scientists have shown that illumination by the electric light deserved preference over all other methods in use, for the following reasons: 1. It does not pollute the air with deleterious gases or other unhealthy products; 2. It induces a greater visual unity than with daylight or gaslight. The conclusion adopted by the meeting was that "the hygienic qualities of the electric light have not hitherto been appraised at their real value."—*British Med. Journ.*, Jan. 28, 1882.

REMOVAL OF THE UTERUS.—Dr. ATTHILL, Master of the Rotunda Hospital, removed the greater portion of the uterus last week, by a modified Porro's operation. The patient had suffered intensely for a long time previously. Malignant disease of the fundus of the uterus was diagnosed. The nature of the proposed operation and its risks were explained to the patient, who readily acceded to its being performed as a possible means of relieving her from her sufferings. She unfortunately succumbed thirty hours after the operation. Microscopical examination of the diseased portion of the uterus showed it to be an epithelioma. The cervix had not been encroached upon by the new growth, but a small portion of the latter had been left in the stump. There was little or no hæmorrhage. Death was probably due to collapse, but there was *post-mortem* evidence of acute septic (?) peritonitis. The specimen was exhibited at the last meeting of the Pathological Society of Dublin.—*British Med. Journ.*, Jan. 28, 1882.

COLLÈGE DE FRANCE.—The Minister of Public Instruction has just determined upon the erection in the neighborhood of the Collège de France of a laboratory of biological physics. By the same decree Prof. Brown-Séquard and M. d'Arsonval, his assistant, are made directors of the laboratory.—*Gaz. Méd. de Paris*, Jan. 28, 1882.

REGISTRATION METHODS IN BRUSSELS.—In the city of Brussels, whenever a birth is registered, the Registrar hands to the parent, gratuitously, a little pamphlet of five pages, containing short and plain directions for the management of children. In Paris, where the mortality among infants is enormous, it is proposed to introduce a similar practice.

ABOUT THE BLIND.—According to the census returns, there are 3907 blind persons in the State of Pennsylvania.

The "Pennsylvania Institution for the Instruction of the Blind" will receive applicants between the ages of ten and twenty-five.

The "Pennsylvania Working Home for Blind Men" will receive those between the ages of twenty-five and fifty, to learn trades and receive employment therein.

And the "Pennsylvania Industrial Home for Blind Women" will instruct and employ blind females of twenty-one years and upwards.

These institutions are located in Philadelphia; the last two are supported mainly by legacies and benevolent contributions.

A WARNING TO DOCTORS.—The Chinese authorities of Shanghai recently issued a quaint decree respecting the neglect of physicians to attend at once on their patients, and the high fees which they charge. They give notice that it is the duty of all physicians to use their knowledge for the benefit of the people; when people are sick they must be ready to attend upon them whenever they are sent for, without regarding the hour of the night or day, or the state of the weather. When people are ill they long for the presence of the doctor as the grain of seed longs for the rains. Instead of doing this, however, the physicians now think that they possess great skill, and not only charge high fees, but insist on being paid full hire for their chair coolies, and they do not care what becomes of the patient so that they get their fees. If these were only charged to the wealthy it would not so much matter; but the poor have to pay them also. An evil practice (the decree declares) also exists by which doctors will not visit their patients before one o'clock in the afternoon. Some will even smoke opium and drink tea until late in the evening. These are abuses, the magistrates say, which they will on no account permit. Doctors must attend their patients at all times. They must, if necessary, visit them several times daily; they must think more of them and less of their fees. Notice, therefore, is given to all officials and people, that a physician who does not attend when he is called, must only receive half his fees and half his chair hire. "If you physicians delay your visits, you show your wickedness, and sin against yourselves." The decree is a model one for a paternal government; argument, entreaty, objurgation, exposition, threats, are all mingled in due proportions.

In order to secure a proper degree of attention on the part of the native physicians, foreign merchants who employ them to attend their Chinese servants and other employés, are in the habit of paying them by the year, and docking off a proportionate amount for the time lost by their days of disability from sickness. This makes the physician anxious to cure the patient as soon as possible, so that his pay shall go on.

INCREASE OF THE PEABODY BUILDINGS.—On December 31, 1881, no fewer than 11,459 persons were in residence in the various groups of Peabody Buildings, showing an increase of 1565 upon the number at the end of 1880. This increase was mainly due to the completion and occupation, during the year, of two new groups of buildings: one in Whitechapel, and the other at Bedfordbury. The Whitechapel buildings were partly tenanted during June, and at the end of the year contained 1200 inhabitants. The smaller block of buildings, at Bedfordbury, contained 116 inhabitants at the end of September, but at the close of the year the residents had increased to 623. These new buildings at Whitechapel and Bedfordbury had 1823 inhabitants at the close of last year; it follows, therefore, that the residents of the older buildings were rather less numerous than at the end of 1880. It is scarcely possible to overrate the eventual beneficial influence of the Peabody fund upon the dwellings of the working classes in London, since the fund is increasing at compound interest. We await with interest the annual report of the trustees on the health of the residents in the Peabody Buildings during last year. Further efforts are, however, required to teach the working classes how to live healthily in healthy dwellings.—*British Med. Journ.*, Feb. 18, 1882.

PRIZES OF THE GENEVA RED CROSS SOCIETY.—The International Committee of the Red Cross, in Geneva, offers three prizes, each of the value of 2000 francs (£80), for the best essays in (1) improvisation of means of treating the wounded; (2) improvisation of means of transport; (3) improvisation of an ambulance or a field-hospital. The essays, which must not have been previously published, may be written in French, German, or English. The successful essays will become the property of the Society, which reserves the right of publishing them either in the original or in translation. Essays in competition may be sent up to April 1, 1883, to the President of the International Red Cross Committee, 8 Rue d'Athenée, Geneva.—*British Med. Journ.*, Feb. 18, 1882.

DIED, in this city, on the 7th of March, aged seventy-seven years, JOSEPH PANCOAST, M.D., Emeritus Professor of Anatomy in Jefferson Medical College. Dr. Pancoast was born in Burlington County, N. J., in 1805. He studied medicine at the University of Pennsylvania, and graduated in 1828. In 1838 he succeeded Dr. George McClellan as Professor of Surgery in Jefferson Medical College, and in 1861 was transferred to the Chair of Anatomy. In 1873 he resigned his professorship, and was elected Emeritus Professor of Anatomy. In our next issue we shall present a full sketch of the career of this eminent surgeon.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM FEBRUARY 28, TO MARCH 6, 1882.

COMEGYS, E. T., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Stanton, New Mexico, relieving Assistant Surgeon Newton.—*S. O. 40, Department of the Missouri, February 21, 1882.*

SPENCER, WM. G., *Captain and Assistant Surgeon.*—Relieved from duty in Department of the Columbia, to proceed to New York City, and, on arrival, report by letter to the Surgeon-General.—*S. O. 46, A. G. O., February 27, 1882.*

POWELL, J. L., *First Lieutenant and Assistant Surgeon.*—Fort Stockton, Texas. Granted leave of absence for one month.—*S. O. 19, Department of Texas, February 24, 1882.*

NEWTON, R. C., *First Lieutenant and Assistant Surgeon.*—When relieved by Assistant Surgeon Comegys, to proceed to Fort Cummings, New Mexico, and report to the Commanding Officer for duty.—*S. O. 40, C. S., Department of the Missouri.*

FRANTZ, JOHN H., *Major and Surgeon.*—Died at Baltimore, Md., on March 2, 1882.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

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